HOT SOIL:
RESOURCE SCARCITY, HUMAN SECURITY AND ARMED CONFLICT IN KARAMOJA, UGANDA

by

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ABSTRACT

Does climate change contribute to armed conflict? The causal relationship between environmental resource scarcity and the outbreak of violent conflict is complex. By analysing the link between resource scarcity and violent conflict in Karamoja (Uganda), we seek to provide a multi-focal perspective on the ongoing crisis in the region. This research argues that increased vulnerability of pastoral livelihoods to risk factors and triggers is a function of the cumulative effect of poor governance, population pressure, erratic rainfall, economic marginalization and a breakdown of traditional authority. The resulting environmental degradation is a *risk factor* that has increased human insecurity in Karamoja. The proliferation of small arms from neighbouring countries is an additional *trigger*. The interaction between contextual risk factors and triggers, which is missing from many quantitative studies that deal exclusively with structural/contextual factors, is essential to understanding armed conflicts.

Keywords: armed conflict; climate change; Karamoja; livelihood strategies; pastoralism; resource scarcity;

Dedicated to the Karimojong.

May you be strong.

"No man is an island, entire of itself; every man is a piece of the continent, a part of the main. .. Any man's death diminishes me, because I am involved in mankind, and therefore never send to know for whom the bell tolls; it tolls for thee".

John Donne, Meditation XVIII, 1623.

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GLOSSARY

Karachuna	Karimojong for ‘warrior’
Karimojong	People living in Karamoja, the north-eastern region in Uganda
Kraal	Mobile cattle camps / fortified cattle enclosures
Manyatta	The social, cultural, political and economic unit for extended families or several families

ACRONYMS AND ABBREVIATIONS

AIACC	Assessments of Impacts and Adaptations to Climate Change
CAP	Consolidated Appeal
CEWARN	Conflict Early Warning and Response System
IDP	Internally Displaced People
IPCC	Intergovernmental Panel on Climate Change
GAM	Global Acute Malnutrition
GoU	Government of Uganda
GHG	Greenhouse Gases
KIDDP	Karamoja Integrated Disarmament and Development Project
NGO	Non Governmental Organisation
OCHA	Office for the Coordination of Humanitarian Affairs
UBOS	Uganda Bureau of Statistics
UCDP	Uppsala Conflict Database Programme
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UPDF	Uganda People Defence Forces
WFP	World Food Programme

1: INTRODUCTION

Does climate change already play a role in the security of marginalized areas? With more scientific evidence on the current effects of climate change, this question becomes ever more pertinent (Campbell et al. 2007; Brown & Crawford 2009). Several NGO's (e.g. International Alert 2007; Oxfam 2008a), international agencies (UNDP 2003, 2007, 2009; Global Humanitarian Forum 2009) and governments of countries at high risk of serious disasters (e.g. Bangladesh, the Maldives) are ringing the alarm bells. Their message is summarized as follows: climate change causes, or will cause, inter- and intra-state conflicts because the degradation of natural resources and the increase of storm and flood disasters will, together with population growth, increase competition and induce out-migration. Both will threaten the human security of millions of individuals and cause a serious imbalance in the global security order.

Whether human-induced climate change is already playing a role in current conflicts is highly controversial. In the academic field there is a rapidly growing body of literature on the topic (see Barnett & Adger 2005, 2007; Gleditsch 2008; Salehyan 2008; Theisen 2008). Some authors (see Lynas 2007; Dire 2008) seem to present the summarized statement above as an uncontested given. To cite Thomas Homer-Dixon: 'environmental scarcities are already contributing to violent conflicts' (1994: 5). Byers and Dragojlovic make a similar assumption in their article on Darfur (2004:2), while Ugandan newspaper 'The Monitor' just recently opened with the following headline: 'Climate change fuels conflict in Karamoja' (The Monitor, 8 July 2009). International

Alert speaks of 'the double-headed problem' for poor countries: climate change *and* violent conflict (2007: 9). The NGO places 46 countries on a list of states facing a high risk of armed conflict as a 'knock-on consequence' of climate change (2007: 17, 44). Others are more circumspect and state that there is little statistical evidence that shows a direct link or causal pathway between climate change and armed conflict (Gleditsch & Nordås 2007).

This research project challenges the repeated claims that climate change is a major driver of armed conflicts in marginalized drylands of Africa by analyzing a case study of semi-pastoralists in Karamoja, Uganda. We will bring together research on resource scarcity and human security, with a specific focus on the role of the state, to explain which factors determine the onset of armed conflict in Karamoja. The key question has two parts: First, what is the relationship between resource scarcity and human security of the semi-pastoralist Karimojong in Uganda? Second, and related, what coping strategies can the Karimojong employ to deal with threats to their human security, and how does the Government of Uganda (GoU) interact within the problems affecting Karamoja?

This research focuses on the processes that shape the consequences of climate variations, to identify the conditions that amplify (or dampen) *vulnerability* to adverse outcomes. In this research project we are not testing the general hypothesis that resource scarcity causes armed conflict. Instead we seek to illuminate *how* resource scarcity is related to human security, governance processes and armed conflict in this specific case study.

1.1 Case selection

The complex problems in Karamoja demand our urgent attention. This north-eastern, semi-arid region of Uganda is the poorest as defined by key human development indicators (OCHA 2008; CAP 2009: 14). An estimated 82 percent of the Karimojong live under the international poverty line, while the national level is 31 percent. The maternal mortality rate is also well above the national levels: 750 per 100,000 live births in Karamoja, compared to 450 per 100,000 live births in Uganda. The under-five mortality rate shows a comparable pattern: 105 per 1,000 live births, compared to 76 per 1,000 live births at the national level (OCHA 2008:1). A persistent drought is contributing to a rapidly worsening food crisis in the region. By August 2008, 750,000 of the 1,1 million Karimojong were highly food insecure and in need of food aid; the number could rise to 970,000 by the end of 2009 (WFP 2009; OCHA 2008).

Additionally, Karamoja is affected by non-state armed conflict. The region is declared by the United Nations (UN) as in *Security Phase 3,*[1] due to cattle raids, inter-community violence, attacks on vehicles, violent robberies, shootings and murder, as well as shoot-outs between armed Karimojong and the Uganda People Defence Forces (UPDF) (WFP 2009: 15). From July 2003 to January 2009, 1,665 violent incidents, 3,674 human deaths related to armed violence, and 189,034 raided livestock were reported to

[1] The United Nations employ five specific security phases to describe the security measures to be implemented by its duty stations, based on the prevailing security conditions in a given country or in parts of a country. Phase 1: precautionary, phase 2: restricted movement, phase 3: relocation, phase 4: programme suspension, phase 5: evacuation. See: http://www.undp.kz/script_site1.html?id=118#64

Conflict Early Warning and Response System (CEWARN).[2] Mkutu (2008: 100) argues that Karamoja is the most armed region in peacetime Uganda; hosting an estimated 30,000 – 160,000 illegal small arms and light weapons. The level of small arms violence (death and injury by fire arm) in Karamoja is significantly higher than any other district in Uganda, including the northern region where the Lord's Resistance Army operates. With a small-arms death rate approaching 60 per 100,000 of the population,[3] Bevan depicts Karamoja as 'one of most armed violence-afflicted regions in the world' (Bevan 2008: 16, 42).

At an international, regional and national level, the case study of Karamoja is also relevant to an understanding of the dynamics of human insecurity. At the international level, the analysis of Karamoja's problems might produce insights that will help policymakers and NGOs respond to the impact of climate change for (semi-)pastoralists in other dryland areas.[4] Drylands cover 40 percent of the earth's terrestrial surface, and half of this area is in economically productive use as range- or agricultural land (IUCN 2008: 4). Drylands are home to 2 billion mostly very poor people. They are mostly

[2] Data for the Uganda cluster from Conflict Early Warning and Response System. CEWARN is an initiative by the Intergovernmental Authority on Development (IGAD), which consists of seven member states: Djibouti, Ethiopia, Kenya, Somalia, Sudan, Uganda and Eritrea. CEWARN functions as a sub regional mechanism that undertakes conflict early warning and response, and attempts to foster cooperation among relevant stakeholders as to respond to potential and actual violent conflicts in the IGAD region. As part of its duties, it measures violent incidents, human deaths and raided livestock since 2003 for the Karamoja Cluster. The Karamoja-cluster comprises the semi-arid area of Karamoja, southern-Sudan and south-western Kenya. Unfortunately CEWARN data sets are not updated and 2005 is the only year that has a complete number of data on the Karamoja cluster. Unfortunately most links to country reports are not working, which means the data on how many incidents, deaths and livestock raided per month, or per year, are not available. See: www.cewarn.org.

[3] Data over 2005 by Conflict Early Warning and Response (CEWARN). See: http://www.cewarn.org.

[4] The term *drylands* in this research project is used to cover hyper-arid, arid, semi-arid and dry sub-humid ecosystems. Aridity zones are based on the ratio P/PET, where P is the area's mean annual precipitation and PET is the mean potential evapotranspiration. This ratio is referred to as the aridity index. Drylands are then classified as hyper-arid (ratio less than 0.05), arid (0.05-0.20), semi-arid (0.20 to 0.50) and dry subhumid areas (0.50 to 0.65) (IUCN 2005: 4). Karamoja is then categorised as semi-arid.

pastoralists, hunter-gatherers and other traditional communities, whose livelihoods are highly dependent on natural resources (IUCN 2008: 47). In the current era, migrating herding societies find themselves in a seemingly-persistent crisis, due to droughts, diseases, violent raids and shrinking transit routes. As a consequence, pastoralists groups remain among the most politically and economically marginalized, rendering them 'susceptible to radicalisation and recruitment by conflict entrepreneurs' (Nori et al. 2005: 3).

From a regional perspective, insights on Karamoja might prove useful for neighbouring countries Kenya and Sudan, whose pastoralist communities also suffer from shrinking resources and environmental and population pressures, and who are affected by the violence of Ugandan Karimojong who frequently cross the borders in search of food and pasture (Bevan 2008; Mkutu 2006, 2008).

At the national level, Karamoja's importance is obvious. Ever since Uganda colonised, Karamoja has been the national 'headache' of subsequent governments. Complete state authority has never fully established in the region, due to fierce resistance of the Karimojong in the past (Wayland 1931; Barber 1962; Knighton 2003; Niamir-Fuller 2007); but also because successive governments have perceived the region to have little strategic or economic interest (Mirzeler & Young 2000: 426). The relationship between the Karimojong and the state remains poor and its governmental authority over the region is weak (Niamir-Fuller 2007). Now that the conflict with the Lord's Resistance Army (LRA) in Northern Uganda is reduced to a '*Security Phase 1'* by the UN, internally displaced people (IDPs) have been steadily returning to their former villages in the provinces of Kitgum and Pader, which border Karamoja. However, moves to promote

their return are threatened by Karimojong criminals who move into the area to steal cattle, seeds and household goods provided to the returnees by the government and aid agencies that are active in the northern region (Oxfam 2008b; IDMC 2008: 5).[5]

There are two possible challenges this research project confronts which should be acknowledged here. First, as a single-country case study it might be criticised for its inability to provide generalizations. But case studies are important in their own right. As Blattman and Miguel note: 'Generalizable or not, a single case can illustrate possible causal mechanisms, generate new hypotheses for testing, and stimulate innovative data collection' (2009: 41).

Second, is the issue of gathering valid and reliable data on the environment and environmental behaviour. Currently there is no way to separate the different impacts of human versus natural drivers of climate change in a specific situation. We do not know how much of the severity of drought or erratic rainfall is due to human-induced climate change or to natural climate variation - let alone global warming. Therefore it can be argued that we cannot draw policy implications from this particular case study. This is true, but whether climate-driven threats to human security have natural or human causes, many of the mitigation prescriptions, like water conservation for example, will remain the same.

1.2 Thesis and methodology

Our main hypotheses are the following: Currently drought is *not* the main driver of armed conflict in Karamoja. We argue rather that the increased vulnerability of

[5] See also article 'Uganda: Cattle Rustling Compounds Returnees Woes'. http://www.alertnet.org/thenews/newsdesk/IRIN/84595be28d387fd9d848447b154f55f0.htm

pastoral livelihoods is a function of the cumulative effect of risk factors (poor governance, population pressure, erratic rainfall, economic marginalization, breakdown of traditional authority), that have increased human insecurity in Karamoja. Additionally, the influx of small arms from neighbouring countries increases the risk of armed conflict, and could therefore be described as a trigger of armed conflict. However in the future, anthropogenic climate change might become a more serious risk factor.

We rely primarily on desktop research. The analysis draws upon data obtained from academic articles; reports from international and local NGO's, the UN; the CEWARN database; international and local newspapers and websites.

This research document will proceed in four principal sections. Section I presents an overview of the available theory on environmental security and proposes a new model to understand pastoralist conflict in marginalized regions. Section II is descriptive and contains data on the case of Karamoja. Using the model from section I and insights from section II, we analyse which risk factors contribute to increased livelihood vulnerability of the Karimojong in section III. Furthermore we assess which contextual factors could have possibly triggered armed conflict in the region. Section IV presents the conclusion.

2: THEORETICAL FRAMEWORK

The issue of environmental security emerged on the international political agendas in the early 1970s. Ever since there has been an increasing concern that resource scarcity and environmental degradation will increase the risk of conflict (Gleditsch 1998, 2008). A United Nations Environment Programme (UNEP) report speaks of a 'significant potential' for conflicts over natural resources to intensify worldwide in the coming decades. It also states that 'potential consequences of climate change for water availability, food security, prevalence of disease, coastal boundaries, and population distribution may aggravate existing tensions and generate new conflicts' (UNEP 2009: 7). Kennedy Mkutu, a researcher on the Karamoja region, states with confidence that 'scarcity, [restricted] mobility and competition, aggravated by climatic conditions, lead to conflict within and across borders.' (2008b: 16). Jeffrey Sachs recently wrote the article 'Stemming the water wars' and says: 'Many conflicts are caused or inflamed by water scarcity' (Sachs 2009).

However, the relation between environmental factors and armed conflict remains sharply contested. Before we will move to the debate on the relationship between shrinking resources, human security and armed conflict, we will first discuss and operationalise a few definitions that will be used frequently throughout this document.

2.1 Definitions

2.1.1 Climate change and resource scarcity

What is 'climate change'? Climate change, or environmental change, refers to a change in the average weather pattern and surface temperature, experienced over a certain period of time (typically decades or longer), due to a combination of natural variability and human activity. Human activities create greenhouse gases (GHG)[6], particularly CO2. These emissions accumulate and trap the sun's radiation in the earth's atmosphere. This process is called the greenhouse effect; one of the outcomes is global warming. When reports or the media refer to climate change, they are speaking of the effects of global warming caused by human activity.

Adaptation and mitigation (to climate change) are terms frequently encountered in almost any debate, report or research related to climate change. In this document, adaptation to climate change refers to 'adjustment made in natural or human systems in response to actual or expected climate stimuli or their effects in order to moderate harm or make use of beneficial opportunities' (IPCC 2001). Mitigation to climate change may be described as 'actions taken to lower greenhouse gas emissions targeted at reducing the extent of global warming' (GHF 2009). In this context, we will only discuss adaptation strategies.

Since the release of two important documents in 2007, the Stern Review and the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), there is a nearly universal political and scientific consensus about the anthropogenic

[6] The United Nations Framework Convention on Climate Change (UNFCCC) covers the emissions of carbon dioxide, methane, nitrous oxide, hydro fluorocarbons, per fluorocarbons and sulphur hexafluoride. Carbon dioxide is the most important anthropogenic greenhouse gas (IPCC AR4, Summary for Policymakers: 5).

causes and the current effects of climate change. The IPCC predicts that temperature in the 21st century could rise from +1.1C to + 6.4C, but regards 2.8C as the median. Sea levels are expected to rise by at least 0.18 cm to 0.59 cm by 2100, excluding the impact of a large and abrupt climate change event (IPCC 2007). Although climate change is likely to have profound effects on agriculture, settlement patterns, natural disasters, disease, and economic activity, there continues to exist controversy and uncertainty, especially over long-term effects and the extreme nature of these effects. The lack of certainty is associated with global indecisiveness about mitigation and adaptation strategies – including who will pay for the damage done, and who will pay for the prevention of damage in the future (Ackerman 2008).

In this research we are not arguing about whether climate change is or is not happening. The findings of the IPCC 2007 report are taken as a starting point. It is the possible *effects* of climate change in relation to human security that matter here – not climate change per se. There are many proclaimed effects of climate change, however in respect to our case study, we will focus on increasing resource scarcity. Climate variability may cause prolonged droughts and land degradation (the physical, biological impairment of the attributes of land), which affect the availability of natural resources like water and vegetation.[7] Subsequently changes in the availability of water and pasture affects the socio-economic system of people whose livelihood is dependent on these resources. In reference to the case study discussed in this research project, we operationalise 'resource scarcity' as a decline in freshwater resources and vegetation

[7] Yet again we have to acknowledge that with the available data, we can not yet establish how much land is degrading by human overuse and how much by climate change. Land degradation may be caused by climatic variability, but also by patterns of economic activities, cultural practices, combined with policy failures (Moyni 2004: 12).

(pasture), as these physical features matter in a significant way to pastoralist livelihood strategies and Karamoja is a region where livelihoods are highly dependent on pastoralism.

2.1.2 Human security

Ever since the United Nations Development Programme (UNDP) used the term 'human security' in its Human Development Report in 1994, there is an ongoing discussion about its definition (see discussion Owen 2004). The traditional aim of 'national security' has been the defence of the state from external threats, while human security refers to the protection of individuals. But what threats should individuals be protected from? This is where consensus breaks down into two camps.

The narrow focus describes human security as the protection of individuals from violent threats (Krause 1998; Mack 2005). Their argument suggests that human security is a response in part to a 'failure of realism' and stresses that the state too needs to be recognized as a possible internal threat to human security. More than 95 percent of the armed conflicts are now *within* rather than *between* states (Mack 2005: viii). A narrow focus on violent threats also avoids practical (policymaking) difficulties, because 'making everything a security threat in effect prioritizes nothing' (Owen 2004: 379). Additionally Mack and Krause argue that a narrow focus could aid analytic utility by avoiding conflation of independent and dependent variables, making causal analysis possible. Others (Alkire 2003; Leaning & Arie 2000) opt for a far broader conceptualization of human security that includes threats from hunger, disease and environmental disasters, because they argue that these threats also undermine physical safety and maintenance of sustainable livelihood strategies.

Although the camps have very different views, they both acknowledge that human security is a lens through which to re-evaluate our understanding of the role of the state and how to link the citizen and the state. Owen proposes a hybrid definition that borrows from both the broad and narrow concepts. He takes a part of the definition of the Commission on Human Security (2002): 'Human security is the protection of the vital core of all human lives from critical and pervasive threats.' This definition separates human security from more general concepts of human well-being and development. It has to be mentioned that so far no one has been able to operationalise this definition which limits its utility. Owen argues for limiting human insecurity to threats that cross a *threshold of severity*. He adds further qualifications to exclude certain areas (for example lack of education as a security threat), and arrives at the following definition of human security: 'Human security is the protection of the vital core of all human lives from critical and pervasive environmental, economic, food, health, personal and political threats' (Owen 2004: 383).[8]

Owen's definition has two weaknesses. First, it is unclear what the threshold criteria are. When exactly does a threat become 'severe'? Should severity be expressed in numbers of deaths, or monetary costs?

When threats that cross the human insecurity threshold are caused by governments, or if governments are unable to protect against them, Owen argues that the international community should act (2004: 384). This is a novel variation of the 'Responsibility to Protect' argument (see Evans & Sahnoun 2002). Again, when exactly should the international community intervene, and who decides on the 'incapability' of a

[8] We do have to wonder what a 'food threat' exactly entails.

certain government? It is then clear that in practice, this conception of human security, with its vague 'threshold of severity', could be seen by governments as a threat by outsiders to intervene in their internal affairs.

Despite its aforementioned weaknesses, Owen's definition of human security is useful for this research project. In particular his concept of human security embraces a range of serious harms to individuals, other than armed conflict that climate change may cause. Obviously his concept also includes conflict as a human security threat.

To determine the implications of environmental change on human security in Karamoja, we examine its impact on livelihoods. In this context, a livelihood 'comprises the capabilities, assets (including both material and social resources) and activities required for a means of living' (Chambers and Conway 1992). For many emergency-affected people, vulnerability and resilience are determined by the availability of resources or 'assets' (Jaspars et al. 2007: 35). Assets encompass what people have, including natural (land, forest, water), physical (livestock, shelter, tools, materials), social (extended family and other social networks), financial (income, credit, investments) and human assets (education, skills, health) (Jaspars et al. 2007: 18).

2.1.3 Armed conflict

When using 'conflict' or 'armed/violent conflict' throughout this document, we refer to a definition of 'non-state armed conflict' by the Uppsala Conflict Data Program (UCDP): 'a non-state armed conflict is a contested incompatibility where the use of armed force between two organised groups, neither of which is the government of a state,

results in at least 25 battle-related deaths in a year'.[9] Non-state armed conflict, as opposed to armed conflict that involves the government as one of the warring parties, is chosen here because it best describes conflict in Karamoja. The conflict in Karamoja is primarily among different groups of local herders, and the government is not involved in any of the conflicts as a combatant.

Furthermore, we define the conflict in Karamoja as a 'low-intensity' non-state armed conflict, as opposed to a high-intensity conflict. A low-intensity conflict has at least 25, but less than 1000 battle-related deaths per year. A high-intensity conflict has at least 1000 battle-related deaths per year.[10]

2.2 The relationship between resource scarcity, security and conflict

Assuming that climate change causes resource scarcity, how will this undermine human security broadly defined, and when does it increase the risk of violent conflict? The current academic literature demonstrates no consensus on the causal mechanisms regarding the relationship between the environment and armed conflict. Additionally the empirical evidence is poor (Barnett and Adger 2007: 640). The basic causal chain (model 1) that most authors present in their argument that positively relates resource scarcity to conflict runs as follows (Gleditsch 2008: 239)[11]:

[9] See for operationalisation of separate elements of the definition: www.pcr.uu.se/research/UCDP/index.htm

[10] Definition derived from the Uppsala Conflict Database Program, see: http://www.pcr.uu.se/research/UCDP/data_and_publications/definitions_all.htm).

[11] Not everyone includes all elements of this causal chain, nor does every author put the emphasis in the same place.

Scheme 1: Thomas Homer Dixon

population growth / high resource consumption per capita → deteriorated environmental conditions → increasing resource scarcity → harsher resource competition → greater risk of violence

Thomas Malthus (1903-1993) was the first researcher to address the link between population pressure and conflict. Malthus hypothesized that while food production grew linearly, population increases tended to be exponential. This would result in the population surpassing the capacity of the earth to feed all people, later referred to as 'carrying capacity'. In the 1990s a research team led by Thomas Homer-Dixon developed a neo-Malthusian model of resource-related conflict. The model is based on evidence from six case studies and uses a tripartite division of resource scarcity: supply-induced (which corresponds to environmental degradation), demand-induced (resulting from population growth) and structural (due to unequal distribution) (Percival & Homer-Dixon 1998: 280). Within this model, Homer-Dixon et al. argue that resource scarcity, exacerbated by population pressure, often leads to migration of populations, which can lead to 'unwanted social effects', including poverty, weakened states and lower economic production. 'Environmental scarcity increases society's demands on the state, while decreasing its ability to meet those demands' (*ibid.*:281). Ultimately, 'grievances' arising from scarcity could then cause outright war between 'resource marginalized' and 'resource captured' populations. Homer-Dixon and his associates conclude that environmental variables interact with sociological variables. However, there is no evidence to assume that environmental scarcity causes armed conflict *directly*. Instead

environmental scarcity factors are 'indirect destabilizers' that may lead to armed conflict (Homer-Dixon & Blitt 1998).

Although Homer-Dixon's research is influential, it is also controversial. Is the link between environmental scarcity and armed conflict that evident? For example, Benjaminsen (2008) looks at whether supply-induced scarcity (caused by droughts in the 1970s and 1980s) is related to Tuareg rebellion in northern Mali. While Baechler (1998) and Kahl (2006: 234) have argued that demographic and environmental stress is often a significant factor behind rebellion, Benjaminsen concludes that analysing the conflict in Mali within an environmental security framework *only*,[12] gives 'flawed and superficial' results; environmental stress seems to have limited explanatory power in terms of the uprisings in Mali. Environmental stress may predispose situations to conflict, but there needs to be a trigger event as well. Hence, Benjaminsen suggests that we have to further deepen our understanding of links, or lack of such links, between violence and environmental stress (Benjaminsen 2008: 832).

Salehyan describes Homer-Dixons findings as 'deterministic' because it downplays other influential factors, like social processes and the decision making capacity of actors (2008: 318; see also Halden 2009). Nils Petter Gleditsch (1998) critiques Homer-Dixon's methodology. Gleditsch argues that the technique of using case studies does not lead to useful conclusions because case studies are not randomly selected and variables are not tightly controlled. Case studies are also largely unsubstantiated with (quantitative or comparative) systematic research (Gleditsch & Nordås 2007).

[12] Environmental security, as defined by Dalby (2002): 'peace that requires the sustainable use and just distribution of natural resources.'

Second, Gleditsch thinks that Homer-Dixon's causal mechanism is too complex because it operates through multiple paths of causality and several layers of intervening variables. It also fails to account for differing levels of economic and political development on resource competition and conflict – that is, highly developed economies experience lessened conflict over resources even as demand increases (Hendrix and Glaser 2007: 697).[13]

A third problem addressed by Gleditsch is 'reverse causality': the possibility that armed conflict may in fact be an important *cause* - not effect - of resource scarcity (the main independent variable in the Homer Dixon model). There is also the possibility of a positive feed back loop (see below). As Gleditsch points out, it is important to determine if the process in question starts with armed conflict or with environmental degradation (Model 2, Gleditsch 2008: 250).

Scheme 2: Nils Petter Gleditsch

armed conflict → environmental destruction → resource conflict → exacerbated armed conflict

There is an emerging literature that attempts to outline possible causal chains from resource scarcity to armed conflict. Theisen (2008) tested population growth and density, water per capita, harmful droughts and soil degradation on both the incidence

[13] For interesting feedback from the same research team on Gleditsch's critique: see article Schwartz et al. (2008).

and onset of conflict. Like Hauge and Ellingsen (1998),[14] he found that a high level of soil degradation increases the risk of armed civil conflict, although with less impact than economic factors (2008: 802). This is in line with de Soysa, Gleditsch, Gibson and Sollenberg (1999), who see a decline in the access to land and returns from human uses of land, as a key process that causes livelihood contraction.

Urdal (2007) tested the neo-Malthusian notion and looked at population-induced resource scarcity and armed conflict in a large N-model, covering all states in the international system for the past 50 years. Following Homer-Dixon, demand-induced scarcity will develop when a resource base is constant, but the population is growing. The availability of resources per person will then diminish as increasing numbers of people have to share it. Urdal examined whether or not population pressure increases the risk of internal low-intensity conflict and only found weak evidence for countries where land scarcity combines with high population growth, other factors being equal (Urdal 2007: 428). Similar to Urdal, De Soysa, found population density is positively related with armed conflict when controlling for trade. This suggests that a bad macroeconomic environment might impact the relationship between land scarcity and the risk of armed conflict (De Soysa 2002). Diehl and Tir (1998) also found empirical evidence from a longitudinal and cross-national study on the relationship between national population pressure and the propensity to engage in *international* conflict. Although the relationship is modest, their research shows that population growth pressure had a significant impact on the likelihood of state involvement in military conflict.

[14] It needs to be mentioned that the dataset used by Hauge and Ellingsen is no longer in use and was strongly criticised by Niemeijer & Mazzacuto (2002).

Levy et al. (2005, see also Miguel et al. 2004 below) demonstrate a strong relationship between rainfall deviations below normal and the likelihood of high intensity conflict. There was no similarly strong correlation for low-intensity conflicts. They present two competing explanations for their findings. The first one is in line with Homer-Dixon & Blitt (1998) and says that drought may decrease levels of capacity, and increase levels of grievance. The second one is in line with Collier and Hoeffler (2004): droughts reduce the return from agricultural labour, and therefore increases the relative returns from rebellion. Levy et al. conclude that multiple causal paths are 'likely to be operating', and that other variables, like political institutions, are 'likely to be important' (2005: 22).

Perhaps the greatest weakness of the environmental literature that attempts to unravel the relationship between resource scarcity and armed conflict, is the neglect of economic, political and cultural-historical variables. This lacuna is recognised in a special issue of *Political Geography*. Researchers in this volume (eg. Barnett & Adger 2007; Hendrix and Glaser 2007; Meier, Bond & Bond 2007) essentially make the same argument: climate change results in a reduction of essential resources of livelihood (Nordas and Gleditsch 2007: 631-632) but 'environmental change does not undermine human security in isolation from a broader range of social factors' (Barnett & Adger 2007: 641). Human insecurity may increase the risk of violent conflict, but climate change is best considered what Hoste describes as a 'threat multiplier', which exacerbates existing trends, tensions and instability (2009: 3; see also Brown and Crawford 2009; CNA 2007). *The Assessment of Impacts and Adaptations to Climate Change* (AIACC) report by Leary et al. finds that the most potentially devastating impacts of climate

change arise 'from a combination of multiple stresses acting synergistically'. A climate 'shock' then has the potential to do the most damage in a context in 'which natural systems are being severely stressed and degraded by overuse and in which social, economic or governance systems are in, or near, a state of failure and so not capable of effective responses' (Leary et al. 2006: 25).

Although estimating the impact of economic conditions on the likelihood of violent conflict is difficult because of endogeneity and omitted variable bias (for example government institutional quality), low per capita income is one of the most robust predictors and explanatory variables for the outbreak and duration of violent conflict (Collier & Hoeffler 2004; Justino 2009; World Bank 2005). Miguel, Satyanath & Sergenti (2004: 746) calculated that a negative growth shock of 5 percent increases the likelihood of conflict in the following year by over 12 percentage points – which increases the likelihood of violent conflict by more than one-half. Estimates by Ciccone (2009) are similar and indicate that a negative 5 percent income shock (caused by below-average rainfall years in sub-Saharan Africa, when extreme drought causes sudden impoverishment[15]) raises the likelihood of civil conflict by 15 percentage points.[16] Negative growth shocks then make it easier for armed groups to recruit fighters from an expanding pool of underemployed, poor, young men (Miguel, Satyanath & Sergenti 2004: 728).

Regarding the political and cultural-historical variable in relationship with the economic variable, the regime type of a particular country may also influence the

[15] There were 48 civil conflicts in sub-Saharan Africa that started during the 1980-2006 period, of which 23 conflicts started following low-rainfall years, and 12 following high rainfall years (Ciccone 2009).

[16] Note that this may not be so much if the risk is just 5 percent per year. Nevertheless it is a small increase in the risk of armed conflict. Ciccone (2009) does not mention a timeframe in his research.

likelihood of violent conflict (Collier 2009). Acemoglu, Johnson and Robinson (2004:2) claim that state institutions and politics are of great influence on the economic output of a country: 'they not only determine the *size* of the pie, but as well *how* this pie is divided by different groups.' A group with *de facto* political power will typically choose the set of economic institutions that maximizes their economic benefit - often at the expense of the poor and underprivileged. Moreover, as Acemoglu, Johnson and Robinson have noted, the institutions of the present are often embedded in political power relations inherited from the past. This can create social, political or economic exclusion for people who do not belong to the ruling power group and suffer from this 'path dependence' (Kaplan 2008: 24).

National and international policies can play an important role in sustaining resources and livelihoods in vulnerable regions. State capacity is important in providing or denying opportunities for people suffering the effects of resource scarcity. In the future, climate change might put serious stress on the ability of humanitarian agencies to provide relief (Webster et al. 2008; Oxfam 2009b). More importantly, climate change might affect state revenues, especially when states are dependent on natural resources (Schubert et al. 2008: 170).

Salehyan adds an important point that we have to keep in mind while analysing the relationship between resource scarcity and armed conflict, in combination with political, economic and cultural-historical factors. Those affected by the increasing

scarcity are faced with three options: to stay (and possibly die), to migrate,[17] or to fight to maintain (or increase) their share of a shrinking pie. Salehyan thinks that armed conflict is an 'inefficient and sub-optimal reaction to changes in the environment and resource scarcities' (2008: 319). Often other (less costly and risky) responses are available, which explains why armed conflict does not always follow from resource scarcity. Therefore it is important for future research to analyse what exactly causes the tipping point in an environmentally degraded region, since 'political competition over power and resources is ubiquitous, while violent conflict is not' (Miguel and Blattman 2009: 11).

2.3 Triggering vulnerability: towards a comprehensive approach

How does resource scarcity undermine human security broadly defined, and when does it increase the risk of violent conflict? Concluding from analysis above, only population pressure in combination with soil degradation have an established, though weak link with an increase of risk on armed conflict. Therefore we argue that an exclusive focus on environmental change and resource scarcity does not adequately explain armed conflict in vulnerable regions. Resource scarcity, caused by population pressure and land degradation, makes people more *vulnerable* to exogenous shocks and could therefore be defined as a *risk factor* for the onset of armed conflict, but it is certainly not a sufficient condition.

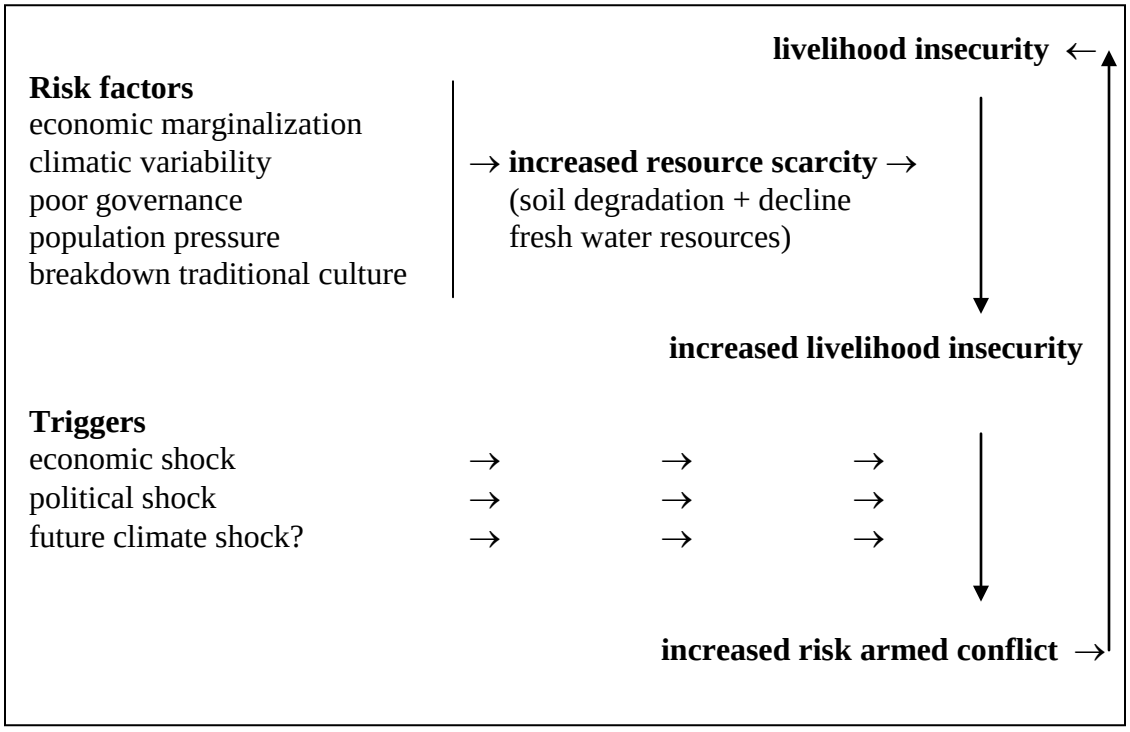
Barnett and Adger (2007: 649; see also Salehyan 2008) put forward three circumstances in which people may become vulnerable to the effects of increased

[17] Migrating away from environmental destruction is at the outset a less violent response than to fight, but when 'environmental refugees' encroach on the territory of other people who may also be resource-constrained, the potential for violence rises (Reuveny 2007). See also the report of the Norwegian Refugee Council (2008).

resource scarcity. First, it is the degree to which they are dependent on natural resources and ecosystem services for their survival. Second, the extent to which the resources and services they rely on are sensitive to environmental change. The third factor is their capacity to adapt to changes in these resources and services. Adaptive capacity depends on the ability to access labour markets, commodity markets, and the prices paid on these markets. Communities also need the ability to pool resources to collectively respond to change and they have to be able to access information and health services. In this regard, the state plays a major role.

With these circumstances in mind, we arrive at the following thesis. The mentioned risk factors could cause a decrease in human security. However, a widespread presence of human insecurity does not predict that violence is more likely than not (Barnett and Adger 2006:3). Hence, risk factors themselves are not a sufficient cause of conflict on their own. We also have to look at *triggers* – short term events that push the conflict to cross the threshold to violence. Below we develop a schematic chain that includes risk factors and triggers. Within this model we suggest that resource scarcity is caused by economic, environmental, political, demographic and cultural variables, and is a risk factor of political violence. Possible triggers could be a sudden regime change, an international, national or regional economic shock, or an extreme climatic event. Plus, in addition to factors that can increase the risk that resource competition leads to conflict, are other factors—notably associated with governance—that reduce this risk. In what follows, we assess the utility of the model in understanding armed conflict in Karamoja by using developments in Karamoja as our case study.

Scheme 3: Comprehensive approach: risk factors and triggers



3: KARAMOJA: LIVING ON HOT SOIL

"There is traditional belief that if one stays in one place for too long, the ground becomes 'hot', because there are too many graves. People start becoming sick and the manyatta must move".

Interview with a Bokora woman, Matany sub-county, March 9th 2007.
Quote from Stites et al. (2007: 23)

Literally, the Karamoja is a hot place to live: temperatures range from 25 in the mountains to 40C in the flat drylands, while annual rainfall is low and erratic (Moyini 2004). Figuratively, in the words of the Karimojong, land is 'hot' when many people die on its soil. The Karimojong history over the past centuries reveals constant hardship (for historical accounts see Barber 1962; Mamdani 1982; Quam 1978; Wayland 1931). Today, the Karimojong are living on the edge of survival. Statistics show that the problems in Karamoja are more severe today than previously (Moyini 2004: 12). In 2007, 570,000 people were 'food insecure', while in 2009 at least 970,000 persons are estimated to be highly 'food insecure'.[18] Global Acute Malnutrition (GAM) rates soared above 10 percent in February 2008. The districts of Moroto and Kotido even showed a GAM rate above the emergency threshold of 15 percent (WFP 2009: 5). In February 2008, the crude mortality rate in Karamoja was 3.9 percent (national average is 0.46 percent), or 1.12 people per 10,000 per day. In September 2008 this level was up to 1.2

[18] World Food Program uses four categories : food insecure, moderately food insecure, moderately food secure and food secure. The indicators used are: food access, actual food consumption, food sources and expenditure on food and per capita total expenditure (WFP 2007: 6).

people per 10,000 per day. The Humanitarian Emergency Level according to WFP is 1 person per 10.000 per day (GoU 2008b: 3).

Except for a handful of anthropological researchers, the region has received little scholarly coverage, whether anthropological, sociological, political, environmental or developmental. The media have not shown more interest either. Knighton (2003: 431) blames the absence of attention for Karamoja on its chronic insecurity and its lack of economic and strategic interest to the government. Consequently, there is a dearth of data regarding for example mobile cattle camps and populations living in insecure areas in Karamoja. Major gaps exist in knowledge regarding livelihood systems, mobility strategies, food security, decision making and gender roles (Stites et al. 2007).

Recently Karamoja has become the focus of significant international assistance. The Consolidated Appeal 2009 (CAP) for development assistance in Uganda has requested over 77 million dollars for the Karamoja region, which is 34 percent of the total aid requested for Uganda.[19] Besides this amount, the government of Uganda requested 69 million dollars from the international community to battle drought and food insecurity in Karamoja.[20] In 2008 the European Commission Humanitarian Aid Office (ECHAO) became its biggest donor (12 million dollars, CAP 2009: 107) and runs an extensive international awareness campaign. In addition, Karamoja may be receiving more attention because the situation in northern Uganda has calmed down considerably. At

[19] We can not calculate whether aid has gone up for the region, because CAP 2008 was clustered by needs, while CAP 2009 is clustered by region. Water, Sanitation and Hygiene (WASH), Agency for Technical Cooperation and Development (ACTED), Ecological Christian Organisation (ECO), Food and Agriculture Organisation (UN-FAO), International Rescue Committee (IRC), Oxfam GB, United Nations Population Fund (UNFPA), United Nations Children's Fund (UNICEF), World Food Program (WFP) and World Health Organisation (WHO) are the main donors in CAP 2009.

[20] See: http://www.digitaljournal.com/article/272083

least 50 NGOs have offices in the northern region (CSOPNU 2006). They are now looking for new ways to provided services.[21] Also the first lady of Uganda, Janet Museveni, was appointed as 'minister of State for Karamoja affairs'. Interesting enough, her appointment coincides with the recent discovery of gold, marble and possibly oil in Karamoja.[22]

In order to understand Karamoja's crisis, we use this chapter to describe the environmental, demographic, cultural, institutional, and economic context in which its problems are embedded. Second, we look at which livelihood strategies the Karimojong traditionally employ to mitigate their vulnerability.

3.1 Physical geography and demography

Karamoja is a region of 27,300 square kilometres. This is roughly the size of Belgium, and it covers 10 percent of Uganda. Karamoja consists of five administrative districts (Abim, Kaabong, Kotido, Moroto and Nakapiripirit) and borders Kenya to the east and Sudan to the north.[23] Karamoja is inhabited by 'the Karimojong'. However, 'the Karimojong' do not constitute a single ethnic, tribal or political unity, but consist of three main ethnic groups, which are the Dodoth, the Jie and the Karimojong (Stites et al. 2007:

[21] Personal account from development worker for Save the Children, currently residing in Karamoja. http://blog.jurriennorder.com/#home. Warchild and Medicins Sans Frontiers are the latest NGOs that opened their new offices in Moroto town.

[22] President Mr. Yoweri Museveni was accused of nepotism for appointing his wife to the duty of minister of State for Karamoja Affairs. He claimed that 'he tried to get others to do the job, but no one was interested in leading the region'. Source: http://www.bbc.co.uk

[23] Some reports refer to 'the Karamoja Cluster'. Karamoja Cluster is generally understood as the semi-arid region along the border with Uganda, Sudan and Kenya (Meier et al. 2007; Mkutu 2008).

9). Within these groups are nine different ethnic groups (or 'tribes), which are divided in clans (Mkutu 2008: 102-103; Knighton 2005).[24]

The Karimojong live in an ecologically fragile environment. The land is composed of semi-arid thorn savannah that varies seasonally and spatially between scrub grassland and desert. Karamoja's climate is characterized by low, highly uneven and spatial variable annual rainfall. The main rainy season occurs in April and there are two shorter periods of rainfall in August and November. The dry period is usually from November until March. Over 90 percent of the region has an average annual rainfall of 500 to 750 mm; the annual average potential evapotranspiration (PET)[25] is over 2000 mm, implying that most of Karamoja is constantly in a state of water shortage and pasture scarcity (Kajura 2000).

Single year droughts are inherent to the ecosystem in the Horn of East Africa and occur every three to four years. Multi-year droughts occur approximately every ten years. Multi-year droughts decimate cattle numbers and destruct crops up to 70-90 percent (Stites 2007: 36). The first recorded multi-year droughts date back centuries ago and occurred around: 1706, 1733, 1800, 1876 and 1900. Major droughts in the 20th century occurred in 1957 and 1979-1982 (Koning 2003: 30). More recently, a severe drought in 2006, a combination of dry spell and subsequent flooding in 2007, and another prolonged

[24] The ethnic groups do not align with the borders of the districts, but roughly speaking, the Matheniko, the Tepeth and the Bokora live in the Moroto district. The Pian and the Pokot reside in the Nakapiripiret. The Jie and the Labwor occupy Kotido and the Dodoth, Napore and the Ik live in the district of Kaabong (Knighton 2005; Gray et al. 2003).

[25] Evapotranspiration (ET) describes the sum of evaporation and plant transpiration from the land surface to the atmosphere. Potential evapotranspiraiton (PET) is a representation of the environmental demand for evapotranspiration.

dry spell in 2008, have lead to at least 70 percent crop failure and severely restrained access to adequate water and pasture for livestock (OCHA 2008:1).

Uganda has one of the highest natural population growth rates in the world (3.2 percent). The total population has increased from 4.8 million in 1948 to 24.7 million people (2002 census), to 29.6 million in July 2008. This population growth is significant as there are six times as many people living on the same land as 60 years ago. The region is expected to have 40 million people by 2015 (HDR 2007/2008: 245), and even 103.3 million by 2050 (UBOS 2008).[26]

The population of the Karamoja region increased three and a half times, from 270,300 in 1969, to 955,300 by September 2002. In 2008 the United Nations Office for the Coordination of Human Affairs (OCHA) estimated the population of Karamoja on 1,107,308 people (OCHA 2008). Karamoja has the highest rate of population growth of Uganda. Overall Karamoja grows at 3.6 percent, with extremely high population growth in three provinces: averaging 5.9 percent in Moroto and Nakapiripirit and 9.7 percent in Kotido (GoU 2007: xii).[27]

3.2 Cultural context

The Karimojong have a rich cultural background, which is vividly described by anthropologist Ben Knighton (2003; 2005). Religion plays a big role in every day life. The Karimojong have a sacred assembly called *akiriket*, which is closely related to ancestral spirits and their god *Akuju* (Stites et al. 2007: 15; Knighton 2005: 134-135).

[26] See: http://www.ubos.org

[27] This extraordinary population figure for Kotido could include in-migration from pastoralists from other districts (double-counting) and Kenyan Turkana, who were officially permitted to temporarily graze in Kotido as a result of a prolonged drought in their homeland. There may have also occurred a default in the counting at the time, explains Moyini (2004: 14).

Both genders are highly valued within Karimojong culture, although their chores in daily life are different. Males are respected for their role as decision makers regarding, political issues, war, alliances, cattle movements and food management in times of scarcity. Women are valued for their future bride price and they are decision makers over daily life: family, children, and village activities are women's responsibilities (Stites et al. 2007: 5; Niamir-Fuller 2007: 23).

The Karimojong's traditional political authority is based on the 'age-set-system', where males progress through a series of transitions. Five age-sets compromise a generation-set, and there are two generation sets: elders (currently known as the Mountains or *Ngimoru*) and juniors (known as the Gazelles or *Ngigetei*) (Stites et al. 2007: 15). Within this system there is strict hierarchy. The elders are responsible for the community's welfare and for the governance of the community. Mkutu writes that elders are 'the leaders, policy makers, peace makers, decisions makers, and resource managers' all at once (2008: 19). The juniors are subordinate, they are the instruments of policy designed by the elders (Niamir-Fuller 2007: 23). Furthermore, power is traditionally invested in an age-class and never in an individual. All decisions are made collectively.

It is important to mention the cultural context of the Karimojong, because the generation system plays a vital role in livelihood strategies. Elders decide when to move cattle and which migratory routes to take. Furthermore, elders traditionally play a very important role in inter-tribal conflict resolution mechanisms. The Karimojong do not have a formal judicial system, and punishment does not play a central role. When conflict between tribes or clans occurs, the traditional objectives are to achieve reconciliation and restore peace through a negotiation process led by elders, who function as 'power

brokers' and 'mediators'. The traditional form of conflict management and resolution is based on informal sanctions, negotiated alliances and mutual trust (Niamir-Fuller 2007).

Niamir-Fuller reasons that their traditional system is oriented towards conflict management because it is not in a tribe's favour to 'punish' a tribe that is part of a broader alliance system. The Karimojong partially secure their survival through a tight-knit network of reciprocity, where befriended tribes and enemies are clearly defined. In times of scarcity, specific tribes may rely on each other through stock- and pasture sharing, for example. These alliances change over time. For example, in 2001, the Jie tribe was friendly with the Matheniko, Labwor and the Ik, and had the Dodoth, Bokora and Turkana as their enemies (Niamir-Fuller 2007: 29-30).

3.3 Institutional and economic context

Historically, the Karimojong have met the Ugandan government with fierce resistance and lack of trust (HDR 2005; Knighton 2003; 2005). In 1916, the British administration attempted to replace their generational system by imposing a hierarchical system of chiefs, based on a model that was derived from the southern kingdom of Buganda. These chiefs and sub-chiefs were given various tasks, among them introducing compulsory education, collecting taxes and enforcing a dress code. The new form of governance met with failure, because the Karimojong were never obedient towards the new system, which never met the approval of the elder Karimojong.

In 1923 one of the chiefs was brutally murdered by a mob organised by the Karimojong (Barber 1962: 117). As a counter reaction, the government of Uganda geared its policy towards simple containment, pacification and sedentarisation of the pastoralists

until 1945. The colonial administration attempted to stabilise the pastoralists by restricting their mobility to strict boundaries, which changed the patterns of land ownership and access rights. Niamir-Fuller lists a few changes, like the establishment of national parks and hunting, forest and wildlife reserves, the loss of rights to use fertile lands in Teso and the loss of 15 percent of their southern grazing lands to the Kenyan Pokot. All together, 40 percent of the original lands of the Karimojong were taken away before Uganda became independent in 1962 (Niamir-Fuller 2007: 27; Koning 2003: 33).

The impact of colonial and post-colonial actions have had several affects. The restriction of their mobility resulted in severe land degradation around settlement areas and a lower productivity of animals. It also eroded established alliances with a great number of tribes, through which the Karimojong secure their assets.

After 1945, the government replaced its narrative by a focus on development of the region, although not much was done but to station a veterinary officer in Karamoja (Niamir-Fuller 2007: 24). Moreover the government had a *laissez-faire* approach until the 1980s. In 1986 the Ugandan state decided to implement the local council system (LC), a five-tier administrative structure decentralisation to promote decentralized democracy (Stites et al. 2007: 19). Local government became based on a hierarchical system. A village council (LC 1) is at the base of the system, and its nine committee members are elected by village residents. The hierarchy continues to the parish (LC II), the sub-county (LC III), county (LC IV) and the district level (LC V). Since 1994, the Karimojong obtained political representation on a national level by the appointment of ‘a Minister of State for Karamoja’, a ‘Special Presidential Adviser for Security Issues’, and a ‘Brigade Commander.’

Although modern bureaucratic leadership was introduced in Karamoja, the system is not fully accepted by the Karimojong due to negative experiences from the past. Committee members are elected democratically, but the Karimojong do not acknowledge them as leaders of their region and there is friction between the modern form of political representation and the traditional generational system (Quam 1996). Elder Karimojong blame the committee members for a lack of standing with ritualized community hierarchies due to spending long periods of time outside the traditional communities to obtain education in the city (Niamir Fuller 2007: 24).

The economic environment in Karamoja has little diversification: 95 percent of the Karimojong depend on pastoralism as their major source of economic livelihood (Mkutu 2008b: 103) There are few economic opportunities and only a handful of small businesses in the district capitals. There is virtually no industry or manufacturing in the five districts of the region. Consequently, there is no investment or business environment. The lack of infrastructure, education facilities and financial services, together with low levels of human capital, are further obstacles to the investment and economic development of the region (Stites et al. 2007: 20).

3.4 Traditional livelihood strategies

Traditionally, the Karimojong have been able to mitigate their vulnerability through competent livelihood strategies. Low and uneven rainfall throughout the region make it impossible to rely solely on agriculture. Hence the Karimojong people have developed a livelihood system that mitigates vulnerability to food insecurity. It combines limited wet-season cultivation (mainly millet, sorghum and maize, although this depends on the region and availability of seeds) with semi-nomadic pastoralism, like the Turkana

and Pokot people in Kenya and Sudan. Through livestock mobility during wet and dry seasons, the Karimojong avoid overgrazing and try to ensure that pasture areas remain productive (Orindi & Eriksen 2005: 8). Rotation to different locations also extends the period of milk production and the presence of dairy products in the human diet (Stites and Akabwai 2009: 19). The strategy involves a dual-settlement system, with seasonal migration in between the settlements. First are the *manyattas*: semi-permanent homesteads inhabited by men, women, children and elderly, that are usually near areas used for cultivation. In general these *manyattas* are more inhabited during rainy season, when people return for cultivation of crops and harvest. Second are the *kraals*: mobile or semi-mobile livestock camps inhabited by a shifting population of adolescent males and females, women, men (including male elders) and children. *Kraals* are led by *kraal* leaders. Most of the *kraal* leaders are older members of the junior age-set and are highly respected within their communities. *Kraals* may consist of up to 50 *corals*, which contain the actual cattle of 100 to 200 per *coral*. Each *kraal* leader has a team of warriors (men aged 16-36 years), the *karachuna*, and shepherds (boys under 15 years). A *kraal* leader implements the decisions of the elder, and their tasks range from being in charge of the main herds of the section and take responsibility for all decisions on mobility, camp location, scouting, watering, labour allocation, and dairy cow distribution (Mkutu 2008: 20; Niamir-Fuller 2007: 23).

Cattle have a nutritional, cultural and economic function in the survival of pastoralist groups. The milk, blood and meat of cattle serve as a primary source of nutrition, because erratic rainfall does not guarantee crop yields (Jabs 2005: 359). Culture wise, the entire fabric of the Karimojong society still depends on cattle. People are

considered ‘true Karimojong’ when they own cattle, and their status within society is derived from the number of cattle they possess (Jabs 2007: 1500). Karimojong culture is still much as anthropologist Neville Dyson-Hudson summarized in 1966:

> *“When born, a [male] child’s most distinctive name is drawn from cattle, he founds and feeds a family of his own with cattle. His adult life centres on defending the cattle he has, and fighting to acquire more. When he dies, he is wrapped in cattle hide and laid in a grave beneath his cattle coral. In short, to Karimojong, as individuals, and as society, nothing is more important than cattle. For them, herding is more than a mode of livelihood; it is a way of life.”*
>
> Dyson-Hudson, 1966: 101-102.

Economically, cattle is a means of exchange. Cattle could be traded within communities or sold at local trading centres in larger villages when there is a poor harvest. Famine can then be offset through the sale or slaughter of an animal, if livestock are plentiful. The sale of livestock is therefore considered ‘the most important drought coping mechanism among pastoralists’ (Orindi & Eriksen 2005: 17). Cattle is also important as a bride price. The bride price for a girl ranges between 40 to 50 head of cattle.[28] The prices could be higher or lower, based on how large the clan of the bride is. A large clan requires more cattle for marriage. Men are mostly not able to pay the bride price on their own and ask their relatives to make a contribution. In order to get the required bride price, cattle could also be raided, although raided cattle is usually sold quickly on city markets to prevent discovery and confiscation (Stites et al. 2007: 52).

[28] Jabs (2007: 1508) keeps the current bride price at 60 to 100 head of cattle. Stites et al. mention that cash is also becoming a more accepted form of payment when arranging a marriage, particularly if the couple has relatives with jobs in the cities, or if the couple had education (2007: 52).

The viability and size of the animal herd matter significantly to a community.[29] To maintain food security, there exists a careful balance between agriculture and cattle herding. Food security of the Karimojong declines dramatically when a poor harvest coincides with a high rate of animal losses. Obviously communities that have fewer animals are more prone to animal diseases, are susceptible to regular raids and are thus at bigger risk of food insecurity (Stites et al. 2007: 35-37).

For centuries the Karimojong practice cattle raiding as a way to secure their economic assets. Jabs writes: 'In the past, when drought or disease decimated a herd, raiding cattle served as a means to replenish the herd and survive' (2007: 1298). Halderman et al. note: 'their [of the Karimojong] raiding can be seen as a quasi legitimate sharing of resources, permitting groups on the verge of economic ruin and even starvation to re-establish their systems of food production and natural resources management' (2002: 27). Raids were also organised to expand grazing lands, raise bride price and 'to demonstrate the heroicness among warriors' (Adan & Pakalya 2005: 16). Traditional cattle raiding involved violence, but it tended to be small scale and the number of cattle that was raided reflected the number that was needed to replenish livestock of the stealing tribe (Mkutu 2003: 9). This type of raiding was not seen as a crime and successful raiders were respected (Jabs 2007: 1499). Also traditional raids were under the strict control of the elders, community healers and seers (Mkutu 2008: 18).

To secure their food production and assets, the Karimojong also practice other livelihood strategies. First, they do not only depend on rural exchanges of cattle and crop

[29] In 1974 it was estimated that to have a long term economic viability and security, the average number of cattle per capita needed to be 6, or 60 heads per household (Niamir-Fuller 2007: 21). Unfortunately, data of today was nowhere to be found.

yields between befriended tribes. They also rely on the access to markets in larger towns to sell animals, firewood, charcoal or honey at local trading centres (Stites et al. 2009: 19). Money from livestock sales is most commonly used to buy food (Stites et al. 2007: 31). The Karimojong also purchase veterinary medicines, or seek casual labour or access health or other basic services in these larger conglomerations (Stites et al. 2007: 4). Second, to increase their chances of a good harvest, they use mixed cropping and diversification of crops as a form of indemnity against pests and rainfall variability. Irrigation with water from rivers and streams is a strategy used to compensate for unreliable rainfall conditions. In this way they mitigate the risk of complete harvest failure (Orindi & Eriksen 2005: 9). Furthermore, the Karimojong established an extended web of relatives and befriended tribes across the region. Before country borders were drawn and restricting government policies were introduced, the Karimojong invested in long-standing contacts in neighbouring districts. These 'stock associates' gave their Karimojong friends access to grazing land and water, watched over their herds and traded food for animal products (Stites et al. 2007: 24). The Karimojong continue to use this web of 'stock associates' as an insurance by splitting livestock among their network. By spreading their economic assets, the Karimojong reduce their vulnerability to animal diseases and cattle raiding (Orindi & Eriksen 2005: 9). Finally, remittances from family and relatives who are working in urban areas help rural families to survive during harvest failure or livestock losses (Stites et al. 2007b; Orindi & Eriksen 2005: 16).

4: CONFLICT ANALYSIS: RESOURCE SCARCITY AND GOVERNANCE IN KARAMOJA

4.1 Armed conflict in Karamoja

'Livestock is the valuable commodity which oils the wheels of conflict', writes Mkutu (2008: 31). Since the late 1970s, cattle raiding between sub-clans in Karamoja and with neighbouring pastoral groups in Kenya and Sudan has become increasingly destructive and less manageable (Mkutu 2007: 35; Bevan 2008: 21). Cattle raiding also changed in nature. Until 30 years ago, raiding had always been a community effort only practiced when the tribe was endangered in its survival by drought or livestock epidemics. A raid was then planned with the forethought, planning and approval of the elders, and carried out with spears in a hand-to-hand combat with large groups of warriors. Raiding was also limited to inter-tribal conflict, to prevent Karimojong tribes from harming each others viable livelihood assets. Thus, raiding was cyclic and only occurred during hard times (Jabs 2007: 1501).

Today, raiding has changed into what Jabs calls a 'maladaptive, ongoing, intractable conflict' (2007: 1500). Raids have become commercialised and intra-tribal. They are carried out with AK-47's, in small groups and without communal consent. Thousands of cattle are raided at the a time; there are records of up to 5,000 animals per raid (Mkutu 2008: 31). The animals are not retained by the warrior or his family, but are sold or swapped as soon as possible for other goods, food, cash, alcohol and weapons

(Stites et al. 2007: 5). Mkutu also reports on so-called 'cattle-gangs': unemployed pastoral youth who raid, but also attack vehicles and rob civilians (2008: 31).

Due to insecurity and a lack of monitoring in the region, it is difficult to obtain viable data on the impacts of Karamoja's violence (Stites et al. 2007). In between September 2008 and May 2009, the number one cause of death in the district of Kaabong was attributed to gun shots, at 29,2 percent. In Moroto this number is 39,4 percent, while in Kotido gunshots count for 54,3 percent of all deaths. The number two cause of death in the three regions is malaria, respectively 25, 21,2 and 12,5 percent.[30] Hospital records compiled by Mkutu indicate that between 1996 and 2003, 7,751 people were injured or killed in small-arms related incidents (Mkutu 2007: 42). From July 2003 to January 2009 CEWARN reported 1,665 violent incidents, 3,674 human deaths related to armed violence, and 189,034 raided livestock in Karamoja.[31]

According to Jabs, the most direct effect of commercialised and intensified raiding is an increase of male deaths. In 1930 violence from raiding accounted for 12 percent of all male deaths. Since the 1970's, violence has accounted for around 35 percent of all male deaths (2007: 1502). Gray et al. (2003) estimated that in 1999 the effects of raids accounted for more than 70 percent of the deaths of males aged 30 to 39 in the Bokora and Matheniko tribes.

[30] These data are derived from preliminary findings from surveys conducted by WFP in all five districts. The WFP analysis on Nakapiripiret did not contain data for these variables. The file that contains the analysis on Abim is currently corrupted. See http://www.ugandaclusters.org/karamoja for downloads.

[31] Kenya and Sudan show far lower numbers. In personal communication (12 July 2009) with CEWARN in Addis Abeba, an employee wrote that there is no specific explanation yet, but explains: 'CEWARN only covers a small area in Ethiopia. Furthermore the clashes between the army and the Karimojong have resulted in more violent incidents. Third, the vibrancy of Kenyan society might help in mitigating conflict. CEWARN is planning a more intensive study to understand the high numbers in Uganda'.

Second, modern cattle raiding has created more inequality in the distribution of livestock. Some communities are left without livestock, while other tribes own thousands of cattle. Bevan reasons that the 'violent, zero-sum nature' of the conflict has led to increasing levels of economically motivated crime, because it reduces the opportunity cost of involvement in armed conflict (Bevan 2008: 27). Third, modern cattle raiding results in a further breakdown of local customary structures, contracts and arrangements aimed to prevent, manage or resolve conflicts (Gray 2000; Jabs 2005: 373; Niamir-Fuller 2007).

The government of Uganda (GoU) has often simplified the formula for explaining armed conflict in the region: the dynamic of cattle rustling is made more lethal by the proliferation of small arms (Saferworld 2008a; GoU 2007b). We also read how several organisations, newspapers and GoU explain food insecurity and conflict in Karamoja as a consequence of climate change or drought: 'While Uganda's climate offers a great potential for food production, the prolonged and frequent droughts in many parts of the country, particularly in the northeast [referring to Karamoja], have led to almost perpetual dependency of food aid.' (GoU 2007a: 2). Recently the Ministry of Health in Uganda explained the inflated mortality rate in Karamoja more careful, and attributed the high numbers to cattle rustling, disease, food insecurity and increased violence due to forced disarmament (GoU 2008b).

For obvious reasons, the Ministry of Health does not address government policies that have had a deteriorating affect on the problems in the eastern region. By scapegoating climate change as the main driver of conflict and food insecurity in Karamoja, the role of the government remains unquestioned. Which factors explain

armed conflict in Karamoja? Does resource scarcity sufficiently explain the onset of armed conflict in Karamoja? In our model in section 2.3 we suggest that resource scarcity is caused by economic, environmental, political, demographic and cultural variables, and is a risk factor of political violence. In this process, governance plays a vital role. Effective government policies could reduce vulnerability to armed conflict through mitigating measures, equal distribution of state resources and provision of social services. At the same time, ineffective or 'bad' policies could deteriorate an already vulnerable region significantly. Second, we have to single out possible triggers that could push a region into armed conflict.

In the sections that follow, we assess for each variable how it contributes to a decrease in human security of the Karimojong. Second, we define possible triggers of armed conflict in Karamoja.

4.1.1 Risk factor 1: Climate change?

Does climate change affect resource scarcity in Karamoja? Several reports (GoU 2007a; GoU 2009; Oxfam 2008a) claim that climate change is *already* showing in Karamoja and OCHA warns that rising temperatures are threatening the livelihoods of the Karimojong.[32] Stites et al. speak of a 0.2 to 1.0 centigrade increase in surface temperatures since 1974 (2007: 11).[33] Hulme et al. have calculated that warming in East Africa through the 20th century was at the rate of 0.05C per decade. Meier et al. write that 'inter-annual variability of rainfall has been increasing and the chances of drought

[32] IRIN: Uganda: Rising Temperatures Threatening Livelihoods. http://www.irinnews.org/Report.aspx?ReportId=83267

[33] Stites et al. refer to IPCC 2007, p. 3. However, these data are not retrievable from the mentioned report nor page number and have therefore to be treated with great caution.

occurring in parts of the Greater Horn of Africa have doubled, from one in six years to one in three years' (2007: 720). Hulme et al. predict that under current (intermediate) warming scenarios, East Africa will likely experience 5 to 30 percent increased rainfall from December to February, and 5 to 10 percent decreased rainfall from June to August by 2050 (2001b: 161). OCHA reports that over the past 30 years, increasingly shorter cycles between drought years have been recorded in Karamoja, decreasing from a 10 year cycle, to a 5- and then 2-year cycle and finally three successive shocks in the past three years: a severe drought in 2006, a combination of dry spell and subsequent flooding in 2007, and another prolonged dry spell in 2008, leading to an at least 70 percent crop failure and restricted access to adequate water and pasture for livestock (OCHA 2008:1).[34]

Although these data show a significant increase, we cannot tell whether global warming is the cause of these increasing temperatures. It could be a normal cyclical variation, or human-caused desertification, which could have resulted in increasing surface temperatures. African climates have always shown considerable variability; they are complex and relatively poorly understood. Arid ecosystems never reach a true equilibrium, instead they constantly move from one extreme to the other (Niamir-Fuller 2007: 20). In most places, data monitoring is poor and therefore their reliability is low (Benjaminsen 2008: 422). Uganda for example has only a third to a half of the number of operational climate monitoring stations of various types that it needs (Oxfam 2008a: 5). Meteorological data are lacking and the time span covered by what data there are is too

[34] The report of OCHA does not refer to its source of data.

short to determine whether Uganda's climate is showing more erratic rainfall patterns and increasing droughts.

The evidence that does exist, suggests that the country could face major problems in the future. For example, agriculture constitutes about 42 percent of GDP (GoU 2008: 13) and employs about 90 percent of the labour force (ILO 2005: 133; see for full report on drought in Uganda: GoU 2008). If we look at how climate change could increase vulnerability to shocks (by Barnett and Adger 2007, section 2.3), it seems clear that the Karimojong will be extremely vulnerable to climate change *in the future:* they are highly dependent on natural resources, their natural resources are vulnerable to environmental change and their capacity to adapt to these changes is low due to already high levels of human insecurity.

4.1.2 Risk factor 2: Demographic and livestock pressure

Human population growth and increase of livestock numbers are currently the major drivers of resource scarcity in Karamoja. These result in a vicious circle of in increased soil degradation and water scarcity. A recent government report concludes that 'the pressures on rural lands, forests, water and biological resources is increasing dramatically to meet the needs of the growing population' (GoU 2009: 165). Satellite images from 1984 and 2002 show an increase of Karamoja's agricultural land (GoU 2009: 61). However, Karamoja's explosive population growth has significant impact on the available land and the use of land. The aggregate land area per person declined from 24.9 acres in 1969 to 7.2 acres in 2002. When protected areas, which constitute about 48 percent of the land area of Karamoja, are deducted to arrive at per capita land availability, the result indicates a decline from 13 acres in 1969 to 3.7 acres in 2002 (Moyini 2004:

16). More recent data show even lower availability of arable land. While northern districts Kitgum, Amuru and Pader have the largest per capita arable land in Uganda (respectively 3.6, 3.5 and 2.4 acres), the districts of Karamoja had less than one acre per capita arable land (GoU 2009: 179).

Besides population growth, Uganda also has considerable livestock growth. The Ugandan Bureau of Statistics (UBOS) has recently released the results of the national livestock census for 2008. According to their data, the national cattle herd was estimated to be 11.4 million, up from 7.5 million cattle in 2005. The Karamoja region was not included in the previous census, but in the current census it scores highest on cattle, goats and sheep: the region holds 2.3 million cattle. Because of its high numbers of cattle, Karamoja is also called the 'cattle corridor': on a national level, Kotido district registered the largest cattle (694,250) and sheep (500,000) herd, and Nakapiripirit has the highest number of goats (547,370).[35] UBOS attributes the growth of total livestock in Uganda to increased incentives to promote cattle rearing due to 'the return of relative peace an stability in the Northern part of the country region, an increased demand on the local market due to the country's growing population, and the governments restocking programme'.[36]

Moyini writes that land degradation due to overgrazing occurs when livestock population per unit area of the ecosystem exceeds the 'safe stocking rate'. As the number of cattle rises per unit area, many grasses cannot survive the grazing pressure. When vegetation thins out, the soil becomes unprotected against sunlight and wind. This may

[35] Although the numbers of livestock in Karamoja are high, animal and crop diseases have ravaged the region for the past year and a half, killing up to 17 percent of small ruminants and 7 percent of cattle.

[36] UBOS has not yet released the data of the census 2008 to the public. Information is to be found on: http://allafrica.com/stories/200906250039.html

result in soil degradation, and ultimately desertification. Overstocking affects to the carrying capacity of a given land. Carrying capacity is often presented as an absolute number. However, it is relative because the carrying capacity of land varies in relation to a number of factors, including the composition of the herd and its movements. In other words, *how* the stock is grazed may be of bigger influence than *how many* animals are grazed (Orindi & Eriksen 2005: 17).

Data, which Moyini derived from UBOS and are slightly old (1991), show that the unit population is increasing more quickly than the carrying capacity of Karamoja's pasturage. Excessive grazing in Karamoja has resulted in a large-scale destruction of grass and shrubs, especially around watering points with a consequent decline in the area available for cattle grazing. Moyini's data is based on the available area of about 1,420,692 ha, and a cattle production of 500,000 in 1998. Numbers show that in 1930, the per capita cattle holding was 2.95, and the area per animal was 7.4 ha. In 1998, the per capita cattle holding declined to 0.9, and the area per animal also declined to 2.84 ha per animal (Moyini 2004: 17-18). If we were to calculate these numbers for 2008 with the mentioned land availability, a population of 1,107,308 people, and a total of 2.3 million cattle, we get to a per capita cattle holding of 2,7, and 0,61 ha per animal. This is a significant decline of available land per head of cattle, while the per capita holding has increased. The demand for water by livestock is predicted to be 2.1 million cubic litres, compared to 1.2 million in 1989 (Moyini 2004: 20). This means that the Karimojong are severely overstocking, which results in the overgrazing of land and water scarcity.

4.1.3 Risk factors 3 and 4: Poor governance and economic isolation

Several studies show that a lack of pro-pastoral government policies have a negative effect on animal-based livelihoods (Stites & Abakwai 2009: 6; ODI 2009). The Ugandan government has responded to quench the violence in Karamoja in a somewhat simplistic manner – namely attempting to remove small arms from the region in the belief that this will cause the fighting to stop, while restricting livelihood mobility. As one government official put it: 'remove the gun, so that this corner of Uganda will return to normal, and world leaders will sleep in their beds more soundly, for one more state being saved from failing' (Knighton 2003: 431).

Since the independence of Uganda (1962), the government has attempted to disarm the Karimojong five times, of which the last attempt is ongoing (1964, 1984, 1987, 2001 and 2006; Bevan 2008: 54). The disarmament attempt of 2001 looked promising: it was well planned and it had the approval of the elders. By 2002, the army had confiscated more than 10,000 guns (Mkutu 2008b: 105). Unfortunately, the attempt failed on several accounts. First, the forcible disarmament phase followed only two months after the voluntary initiative. This time frame was too short for the Karimojong to disarm, while simultaneously enabling them to employ other strategies to secure the safety of their assets. Second, the disarmament exercise was suspended prematurely. The Uganda Peoples Defence Forces (UPDF) left Karamoja rapidly in 2002 to respond to a renewed LRA threat in the north-western region of Uganda. This left the Karimojong virtually unprotected from neighbouring armed groups (Bevan 2008: 54-55).

The failed disarmament of 2001, influenced the renewed disarmament initiative in 2006, called the Karamoja Integrated Disarmament and Development Programme

(KIDDP). The KIDDP is ongoing, and the overall goal of the programme is to improve human security and to promote conditions for recovery and development in the region (GoU 2007b). However, in this disarmament programme, strong and visible development projects are so far absent (CAP 2008: 12), and the Karimojong are much less willing to give up their arms. The UPDF say that they have collected 6000 arms, but the media report lower numbers, ranging from 1000 to 2000 guns (Mkutu 2008b: 109).

New to this disarmament initiative is the 'cordon and search' method: soldiers secretly enter an area and surround the 'suspected' *manyatta*, *kraal*, village, trading centre or cattle market. The occupants are then searched, and suspects are taken for further investigation to nearby army detachments. Anyone who is seen running out of the cordon with the intention to escape (armed or not) is ordered to be shot dead. Since the start of the KIDDP implementation, the UPDF was met with fierce resistance, resulting in many deaths on the side of the Karimojong (CEWARN 2006), but also on the side of the military. The cordon and search method has been fiercely critiqued in the 'Get the Gun' report by Human Rights Watch (2007), because of numerous reports of torture, beatings and sexual assaults by UPDF militaries.

The strategy of disarmament may be critiqued in four ways. First, the Karimojong are not the only people practising cattle raiding as a livelihood strategy. Being without arms, is almost like buying an insurance on becoming victims of lethal raids by neighbouring Turkana and Pokot who remain armed. Second, research shows that imposed disarmament programs are largely futile because arms from Sudan can quickly be secured to re-arm the Karimojong (Bevan 2008). Data show that guns are still in demand, as their costs in terms of exchange with cattle have risen from 2-3 cows per AK-

47 in September-November (Mkutu 2007) to 5-7 cows in June 2006 (Mkutu 2008b: 109). Third, forcibly imposed disarmament campaigns worsen the already bad relationship between the Karimojong and the Ugandan government. Fourth, disarmament may slow conflict and promote dialogue, but in itself it is insufficient to reduce violence in low-intensity conflicts because the *root causes* are not addressed. Mkutu's analysis for Karamoja reveals that there is indeed no evidence available to indicate that disarmament (either forceful or voluntary) brought about any period of peace. Instead, disarmament exercises appeared to exacerbate insecurity (2008b:110; Stites and Akabwai 2009: 11): a total number of 396 violent deaths have been recorded in connection with the implementation of the disarmament programme from June to November 2006 (CEWARN 2006).

Another policy that was implemented in 2007, is the 'protected *kraal*': a state enforced ban on the inter-district movement of livestock as a means of safeguarding livestock. The virtual embargo on the migration of livestock into neighbouring districts has interfered with the traditional nomadic semi-pastoralist way of life in Karamoja, in which freedom of movement allows pastoralists to seek out fresh grazing pastures for their livestock, and trade livestock in trading centres or with other tribes. A recently published document by Stites and Akabwai (2009) reports that the traditional dual settlement system has virtually disappeared in Moroto and Kotido districts. Livestock are now in *kraals* adjacent to UPDF barracks. Once the animals are in the barracks, the soldiers decide if and when *kraals* will move to a new area. Every barrack has their own 'release and return times'. In this way, livestock owners lose their decision-making power over animal mobility (Stites and Akabwai 2009: 16). A negative side effect of the

government's policy is an increase of pressure on land and water resources surrounding the barracks. These grazing areas are already of poor quality and overstressed from recent droughts. Second, the intensified number of animals have increased the risk of diseases spreading. WFP reports that livestock in the protected kraals are less healthy and underfed. Increased mortality rates of livestock cause economic loss and increase the vulnerability of the Karimojong (WFP 2009; CAP 2009).

Findings (Stites et al. 2007; Niamir-Fuller 2007) indicate that groups that are able to retain their pastoral livelihoods – based on seasonal mobility, a balance of human and animal production between *kraals* and *manyattas*, and seasonal cultivation where possible - are, in general, pursuing the most sustainable livelihoods and have the highest levels of human security. Furthermore, data from these studies show that these groups appear to have greater intergenerational harmony, less participation in raiding, less exploitation of the natural environment and higher school enrolment. Research conducted by the World Food Program has produced similar findings: 'livestock ownership and the consumption of animal products were significantly greater in both number and frequency for food secure groups.' (WFP 2007: 27).

Concluding from this research, it would then be logical to promote livelihoods that employ pastoralism - though this will not address the long-term challenges created by human and animal population growth. Several NGOs (e.g. Save the Children) are currently advising Karimojong herders to stay put in their *manyattas* to grow crops as a 'new' livelihood strategy. The government also promotes agriculture as viable means of

living, especially in the future.[37] A government official reports to the state-owned newspaper 'The Monitor': 'Using [crop] farming we shall fight to end hunger and poverty in Karamoja. What we need is leaders to mobilise the Karimojong to engage in farming and other profitable ventures. (…) After the success of the UPDF disarmament programme and the sensitisation of the masses about the value of crop farming, many Karimojong are slowly dropping the traditional attachment to the cattle and are adopting to farming' (The Monitor, 1 November 2008).[38]

To conclude, political and economic marginalization have deprived Karimojong people from a fair share of state resources. The state of Uganda is a barely visible authority for the Karimojong. The lack of social services and state-funded infrastructure, like schools, clinics, roads and police posts[39], combined with the forced disarmament procedures, has resulted in a weak social contract between the state and the Karimojong. The disaffection of the Karimojong is evident in the extreme low voter turn-out in Karamoja in the 2006 elections (Oyana 2006: 6).

4.1.4 Risk factor 5: Institutional crisis

Currently in Karamoja there is a crisis that undermines the system of traditional authority without replacing it by effective national governmental authority. The state,

[37] This strategy could prove ineffective if the predicted effects of climate change show. The IPCC writes that the length of the growing season and yield potential is likely to decrease in semi-arid and arid areas. Overall, warming and drying may reduce crop yields by 10 to 20 percent to 2050 (IPCC 2007). Jones and Thornton calculate that crop failure rates are to increase from 18 to 30 percent, which translates to a season failure from nearly 1 year in 6, to 1 year in 3 (2008:5). Especially for people who live far from large human settlements, off-farm employment and market opportunities to substitute the loss of crops, are much more limited (*ibid.*:2008:9).

[38] http://allafrica.com/stories/200811010092.html

[39] In 2006, there were an estimated 137 police personnel in Karamoja (HRW 2007: 18), suggesting ' a police officer to population ratio of around 1 : 7,3000, which is about one-sixteenth that of the UN standard of 1:450, and one-quarter that of the national ratio of 1 : 1,800.'

which should be maintaining law and order, is not fully accepted as an authority by the Karimojong, due to a longstanding history of neglect and repression. In the meanwhile there is an ongoing crisis in the local customary power system.

The passing of power from one generation of elders to a new generation of elders happens in a succession ceremony. The succession usually happens when all age-classes within a generation-set have been 'open' for a number of years, meaning that 'all males within that generation-set who are of an appropriate age will have had an opportunity to be initiated into an age-class within that generation-set' (Stites et al. 2007: 16). The last time this promotion happened and power passed from one generation-set to the next was in 1956-1958.

There are various causes for the delay in succession. Knighton (2005) attributes the long wait to hand over power to the next generation to a reluctance on the part of the senior male generation-set to relinquish control: the current elders will then be no longer the decision makers for politico-religious affairs. However, social tension coming from juniors who push to take control from the senior-generation-set will likely eventually force a power transition, because the currently disempowered junior generation will start feeling pressure from *their* sons to move into a new generation set.

Stites and her research team also look beyond inter-generation power struggles and explain that ceremonies for succession only take place in times of prosperity, such as a series of years with good harvests or a longer period of peace between tribes and clans. These two particular conditions have not occurred simultaneously in many years, due to droughts and intense cattle raiding. Stites et al write: 'all groups are meant to hand over power simultaneously, but the present cleavages among these groups make this almost

impossible' (2007: 18). Additionally, the sacred ceremony site at Nakadanya, which is considered the heartland of Karamoja, is believed to be cursed by their god *Akuju*, because of an unsanctioned raid in the past, that resulted in the death of the most respected elder's son. In order for the ceremony to take place, the site has to be 'cleansed'. Some efforts were made to restore the power of Nakadanya, but many elders think that shortcuts were taken and the rituals were not undertaken properly. As a result the site of Nakandanya can not accommodate the rituals needed for a succession. Consequently the succession ceremony cannot take place.

Local hostilities need not escalate to serious armed conflict, and can be managed if there is the political will to do so, says Salehyan (2008: 319). In this respect, local dispute-resolution regimes play an important role in avoiding escalation of armed conflict (Niamir-Fuller 2007; Salehyan 2008). Weakened traditional customary cooperation methods could increase vulnerability to conflict, argues a report by UNEP (2003: 19). It could then be argued that a lack of legitimate authority in Karamoja is increasing the risk of armed conflict. The Karimojong elders are no longer respected by the younger generation, and have largely lost their role as power brokers and mediators.

Another consequence of a lack of authority in the region is impunity: little is done to prevent raids, recover stolen property or prosecute raiders. Pastoralists are left with little option than to buy weapons to protect their *kraals* (Stites et al. 2007: 60-61).

Currently little is known about exactly how the breakdown of traditional political authority may contribute to conflict in Karamoja, or to pastoralist conflict in general. To understand these dynamics more research is needed.

4.1.5 Triggers 1 and 2: Proliferation of small arms and regime change

The risk factors described above, have all been present in some form or the other, for over 30 years. At best, we could conclude that the risk factors above have steadily intensified over the past three decades. However, the number of human deaths related to cattle raiding has significantly increased since 1980, as shown by Jabs (2007) and Stites et al. (2007). Which short-term events (triggers) account for the intensification of armed conflict in Karamoja since 1980?

Several authors relate the proliferation of small arms in the region to a raise in the intensity of the armed conflict in Karamoja. In allowing insurgencies to gain momentum, capturing weapons from state forces or stockpiles are often pivotal. Bevan (2005: 186-187) describes this process as the 'acquisition spiral'. Mirzeler and Young (2000: 416-417) narrate how in 1979, the fall of Idi Amin's violent regime caused the reordering of the political power balance in Karamoja, who was previously heavily occupied by the military of the dictator. In the sudden power vacuum that occurred, the Matheniko Karimojong sub-clan overran a Ugandan Army barrack in Moroto, resulting in the capture of an estimated 60,000 assault rifles and extensive stocks of ammunition (Mkutu 2007: 36). Shortly after the capture, Karamoja was hit by a serious drought and famine. The acquisition of the enormous amount of arms, had caused a power imbalance between ethnic groups. The newly armed groups robbed less protected groups of nearly all their cattle (Mirzeler and Young 2000: 417), which exacerbated the effects of the severe droughts.

Currently, the trade in small arms is still thriving and continues to create power imbalances (see reports on small arms trade: UNFL 2007; Saferworld 2008; Bevan 2008;

Mkutu 2008). We have to be careful in arguing that the dynamic of cattle rustling is made more lethal by an increased influx of small arms (Bevan 2008: 21). Modern assault rifles have not only escalated the lethality of traditional cattle raiding but have also changed cultural norms concerning raiding practices (Jabs 2007: 1512). Jabs reasons that guns have caused a breakdown of local customary structures of cattle raiding, which in turn affect the livelihood strategies of the Karimojong, discussed in section 4.1.4.

4.2 Negative coping mechanisms

Of all households in the district of Moroto, 99 percent reported experiencing economic, health, social or security shocks in the last 6 months of 2008: 76 percent reported rising food prices, 59.2 percent looting of assets, 41.2 percent conflict and raiding, 37.2 percent reduction in access to credit, 10.8 percent human disease and 6.4 percent death of household member.[40] These shocks made it virtually impossible for the Karimojong to maintain their assets through traditional, relatively sustainable, coping mechanisms. 'Coping' refers to actions and activities pursued by individuals and communities when confronted with unanticipated livelihood failure (Jaspars et al. 2007). Out of despair the Karimojong adopt new, less sustainable ('negative') coping mechanisms, which contribute to destroying their own traditional coping mechanisms and their habitat. Together this adds to an increase in vulnerability and a decrease in human security, which is presented in the following scheme:

[40] Preliminary findings from WFP survey in Moroto. Download report at http://www.ugandaclusters.ug/karamoja.htm

Scheme 4: Negative coping mechanisms

High vulnerability → shock → negative coping strategy → increased vulnerability of future shocks

Clearly the Karimojong confront an increasing range of challenges:

1. A recent analysis of surveys by WFP in 2009 shows that at least 50 percent of the population in Karamoja has skipped meals for at least one whole day within the last 7 days prior to the survey. Severe malnutrition has a negative impact on livelihoods because herding cattle and working on arid land demand strong health.

2. Deforestation for charcoal production is a further problem. It destabilizes soils and changes local hydrological cycles reducing the carrying capacity of an already stressed environment (Percival & Homer-Dixon 1998: 285).

3. "Distress selling" of livestock, results in lower prices (WFP 2009:5) and reduces both family assets and is both a cause and effect of reduced incomes.

4. In search of economic opportunities the Karimojong migrate to urban areas in times of drought or crisis. This strategy can offer certain benefits but can also have significant negative impacts, like the disintegration of families and clans, child out-migration, exposure to crime and HIV, and experiences of abuse by both the state and civilians (Stites et al. 2007: 46; Stites et al. 2007b; Kaduuli 2008; UGASC 2006; WFP 2009).

5: CONCLUSION: MOVEMENT ON THE MARGINS

Concluding from this research, we argue that increased resource scarcity, here defined as soil degradation and water scarcity, results in decreased human security levels in Karamoja, due to serious strains put on livelihood strategies of the Karimojong. We have found no clear empirical evidence that climate change is currently affecting Karamoja. Hence, we cannot support popular claims to the effect that climate change is currently fuelling conflict in the region. However, if current global warming projections are correct, then climate change is likely to become a significant risk factor in the future.

Resource scarcity in Karamoja is currently caused by severe population and livestock pressure, historical economic marginalization, recent erratic rainfall and droughts, and poor government policies. To a lesser extent, the breakdown of traditional culture of the Karimojong may contribute to resource depletion. Local dispute-resolution regimes and traditional customary cooperation play an important role in avoiding escalation of armed conflict. The current crisis over authority has broken down traditional conflict resolution and has corrupted the decision making process over where to graze and water the animals. This has resulted in bad management of the available resources. An increase in resource scarcity results in negative coping mechanisms, which in turn also add to resource depletion and increased vulnerability. Together, these risk factors leave the Karimojong on the edge of survival.

Structural risk factors like population growth do not explain the intensified nature of conflict in Karamoja since 1980. Here we have identified the sudden regime change in

1979 and the acquisition of a large amount of arms, in combination with a severe environmental shock (drought) as triggers of armed conflict. These triggers tip situations with a high structural potential for conflict into outright violence. The proliferation of small arms in the region continues to contribute to the insecurity of the region.

Together with the encroachment of external factors, climate change will further undermine the sustainability and viability of the livelihoods of the Karimojong. The effects of climate change will without a doubt pose difficult policy challenges. In confronting increasing scarcity, marginalized societies have a number of options: they can seek to increase the productivity of their land (e.g. a 'green revolution'); they can rely on humanitarian assistance (a short-term measure); they can migrate in the hope of finding more viable livelihoods elsewhere; or they can fight to maintain or increase their share of the shrinking resource base.

Clearly, governments can play a critical role in confronting the challenges posed by resource scarcity by developing and implementing sustainable policies. Policies to improve the adaptive capacity of the Karimojong pastoralists can possibly reduce the likelihood of armed conflict in the region. What can the state of Uganda do to decrease the aforementioned risk factors and increase the adaptive capacity of the Karimojong? In the following section a number of policy recommendations are presented.

Policy Recommendations

Sustainable economic development of Karamoja is pivotal to the survival of the Karimojong. But how to obtain economic growth in an ecologically vulnerable and

politically insecure region? When thinking of pro-pastoralist policies, we need to understand that herding livestock continues to be the most fundamental and viable livelihood strategy for the Karimojong. Stites and Akabwai recommend that, 'animal-based livelihoods should be promoted, protected and supported, and should be a central part of all national and international policies and programs in the region' (2009: 36). However, looking at how population and livestock pressure are causing land degradation and water scarcity, our research suggests that animal-based livelihoods in the long-term might prove unsustainable. But abandoning livestock herding altogether is not an option, as it remains the backbone of not only Karamoja's economy, but their whole society. Instead, we suggest focusing on policies on livelihood diversification and intensification.

Livelihood diversification for the Karimojong entails diversifying income generating activities from both crop farming and livestock herding, but also from other off-farm income earning activities. Access to economic and social capital will help the Karimojong in mitigating food security when their natural capital is failing to provide a livelihood. Comprehensive economic research should be done to determine which entrepreneurial activities (e.g. manufacturing products) could have a comparative trade advantage in the region. Investment in schools would enhance human capital.

Livelihood intensification focuses on improving the productivity of economic arrangements to create more output per unit area through investment in capital or increases in labour inputs. This needs to be done in a sustainable manner to avoid more land degradation. Government policies could help to establish more veterinary centres to obtain better animal health; disease control policies could enable international trade of cattle. The government could also create more trading centres to facilitate trade between

herding groups. Additionally, the government should look into generating a better balanced access to grazing and water resources. Mobility is crucial for herding livestock, and current restrictions in mobility are putting pressure on the available land. Furthermore, the government of Uganda should invest in research to assess which crops will grow best in different regions, instead of just promoting growing crops.

Without security in Karamoja, sustainable development will be untenable. Without development, security will prove elusive. Therefore, the government needs to invest in security measures for the Karamoja region, while simultaneously working to make development policies more effective. The previous disarmament initiatives have thus far been unsuccessful because the root causes of insecurity in the region have not been addressed. Obviously, Karamoja needs disarmament, and according to research of Stites and Akabwai (2009:35), the Karimojong themselves *want* disarmament. Disarmament could bring peace to the region only if it is part of a broader initiative to promote development and security. To obtain security in the region, governments of neighbouring countries should also invest in disarmament, while the Ugandan military should affectively protect the Karimojong from foreign raiders.

Furthermore, government policies should address the risk factors that contribute to resource scarcity in the region. Population and livestock growth are processes that are not easily reversed. Development remains the best form of birth control. But whether or not population management can be a solution to the projected resource scarcity is not clear? The issue is so politically sensitive as to be almost taboo (Collodi and McCormack 2009). The possibility of a serious debate about population management may, however, become more viable as climate change becomes a more pertinent and visible threat.

Land degradation and water scarcity can also be addressed by investment in low-cost technological inventions. New, drought-resistant crops can be introduced and the introduction of better seeds and fertilizers can make improvements in soil quality without increasing the amount of land under cultivation (Salehyan 2008: 323). Water storage systems and irrigation schemes can alleviate the problems of unreliable rainfall. With any introduction of a new technology, there needs to be a careful assessment of the local needs, and the local authority figures need to be closely involved in the implementation process.

Addressing the trigger factors discussed above will not be easy. To predict the effects of political change and assess when a situation will erupt in political violence depends on factors - agency and contingency - that are almost by definition impossible to predict. Regional cooperation could possibly make a country more resilient to external shocks. In the case of Uganda, disarmament initiatives will not work unless the security in the broader region is addressed. It could therefore be useful to establish a forum with Kenya and Uganda to address the regional instability and decrease the influx of small arms into the region. The neighbouring countries could also discuss natural resource management strategies, and exchange ideas for peace-building and conflict mitigation.

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