**Environmental Conflict Management in Kenya: Understanding the Resolution of Season Driven Ranch Conflicts in West Pokot**

**Bramwel N. Matui[[1]](#footnote-1), and Joshua Kwonyike[[2]](#footnote-2)**

**Abstract**

This paper examines the presence of intra-Pokot environmental conflict and factors associated with it with the aim of understanding and recommending its resolution. For the sake of the paper, conflict can be defined as disputes between two or more people, groups or communities. It is a disagreement over the use of a natural resource such as water, pasture and grazing land or dispute of ownership of livestock, and land (ITDG-EA, 2004). On the other hand, Conflict resolution refers to measures aimed at minimizing, reducing or outrightly removing the conditions that are proximate factors associated with the conflict. The main question asked here is: What are the factors associated with the presence of the conflict, and how can this conflict be managed?

**1.0: Introduction**

Three key issues facing mankind in this 21’ century are environmental degradation, impoverishment and the insecurities caused by both of these factors (IHDP, June, 1999). Indeed the concept environmental security has gained prominence since the time of the realisation that the cold war was ending, so much so that in 1992, the Security Council of the United Nations stressed the non-military aspects of security (Kirkby & Moyo, 2000). In this way, both the domains and characteristics of security have been extended (Wohlgemuth, Gibson, Klasen & Rothschild, 1999). The characteristics of security are among others, military, political, economic, social, human and environmental. On the other hand, the domains are international, national, regional, communal, household and individual (Ibid). Increasng1y being accepted is that security is the basis for sustainable development.

Since, conflict is a condition considered a threat to security, much of environmental security has focused on environmentally induced human conflicts (IHDP June, 1999). For instance, a number of researchers have concentrated specifically on the role of environmental change and resource depletion as potential causes of violent conflict (Homer-Dixon 1991, 1994; Libiszewski, 1992). Such conflicts have been thought able to pose a serious threat to the security of individuals, regions and nation states; and consequently have to be resolved (THDP, June, 1999 June, 1999). Nevertheless since the notion environment connotes diverse situations, more of this phenomenon should be understood. This paper argues that:

* Intra-pokot conflicts in group ranches of West Pokot District are environmentally induced.
* These conflicts have proximate factors associated with them; and the conflict climaxes during the long rainy seasons of April to August.
* Resolution of these conflicts revolves around addressing the degradation problems and the group ranch inadequacies.

The paper begins with a review of literature with regard to the status of environmental conflicts in northern Kenya and attempts at resolution of these conflicts. The next section deals with the conceptualization of environmental conflict problem and the implication of this. Then it delves on methodology, preliminary findings of data analysis; and the discussions of hypothesis testing. Finally the paper recommends management of the conflict.

**2.0 Literature Review**

**Environmental Conflict and its Management in Northern Kenya**

Recent studies (ITDG-EA, 2003; Amisi, 1997; Ibrahim & Jenner, 1996; Kamenju, Mwachofi & Waragu, 2003; KHRC, 2001; Mkangi, 1997;) have focused on the presence of conflict and its management in Kenya; particularly in seven districts that constitute the arid and semi-arid northern Kenya. These districts include West Pokot, Marakwet, Baringo, Turkana, Samburu, Marsabit and Wajir. The bulk of these studies mainly focus on inter-ethnic conflicts as opposed to intra-ethnic ones. The protagonists of these conflicts are pastoralists that are largely nomadic and depend on livestock (cattle, sheep, goats and camels) for their livelihood. In some circumstances, the conflict has pitted agriculturalists with pastoralists (Mkutu, 1999; Hussein, 1998). The major protagonists include the Pokot, the Marakwet, the Turkana, Samburu, Somali, Borana and Rendille (ITDG- EA, 2004).

Although the term “environmental conflict” is not explicitly used to refer to these violent conflicts, the issues raised show that the conflicts are environmentally induced. For instance, there is an increasing consensus that northern Kenya has scarce pasture and water resources (ibid). The upshot of this scenario is that competition over the use, access and control of the little pasture and water is the main cause of conflict in the vast region (ITDG-EA, 2003; Binsbergen, 2002; KHRC, 2001; IPCS, 2003). This competition has been known to be exacerbated by the proliferations of small arms and light weapons (IRIN, 2001). Other critical factors that are associated with the conflict include increasing human and stock numbers (Mkutu, 1999), comrnercialisation of the traditional culture of cattle rustling to restock after severe drought, or diseases, ethnocentrism, politics, revenge, and land issues and disputes (ITDG-EA 2003; 2004).

The conflict appears acute during the dry season (Mkutu, 1999), when livestock are known to crowd in smaller areas with pasture and water (ITDG-EA, 2003; Goldsmith, 1997). Similarly, the semi-arid and arid areas have been known to be affected by consistent and persistent droughts; and this is common especially among the Pokot who neighbour the Marakwet hence creating conditions for raids (ITDG-EA, 2003). A typical example of dry season conflict in northern Kenya is found in the Ilemi-Triangle (Mburu, 2003). The Triangle is defined as Ethiopia (claimed), Kenya (defacto) and Sudan (claimed) (ibid). The Triangle is home to five ethno-linguistic communities: The Turkana, Digida, Toposa, Inyangtom and Dassanech. Most of these communities have been known to graze their cattle in the Triangle during dry season, leading to serious competition and conflict that result to killings, maiming and violent livestock thefts (Beaten, 1950; Driberg, 1992; Serge & Lamphear, 1994; Blake, 1997; Almagor, 1978; and Hiroshi, 1994).

This conflict in northern Kenya has had serious socio-economic impact on the inhabitants (ITDG-EA, 2003). In total, 164,457 were displaced; majority being women and children (ITDG-EA, 2004) and thousands of people killed (ITDG-EA, 2003; Mbogo, 2003). Many, particularly in Marakwet, have had their livelihood jeopardized; and across the region, the scenario is the same: children have dropped from school leading to high rates of illiteracy and health facilities have been abandoned leading to ill health (ITDG-EA, 2004). In addition, there has been environmental degradation and serious poverty situations that render the districts in the region amongst the worst ten in all development indices in the country (ITDG-EA, 2003). In West Pokot so far 62,388 people, 60% of the total population along the Kenya-Uganda border, have become victims of this conflict (Ibid).

Apart from the inter-ethnic conflicts, attempts have also been made to understand intra-community conflict. This is particularly true with regard to those that are violent in nature. For instance a study has been done (Goldsmith, 1997) on the clashes over grazing land between the Tigania and Igembe of the wider Meru Community. Similarly in Wajir District, the Somali clans have been in dispute and this has resulted into displacement of 32,914 people (ITDG-EA, 2003). These clan conflicts in the wider North Eastern Province seem to be firing up as revealed by Media reports (Chesos, January 12, 2005). Intra-Pokot conflicts based on land disputes have also been reported to exist (ITDG-EA, 2004).

Attempts to manage conflicts have been discussed alongside the understanding of the conflict

(ITDG-EA, 2004; 2003). First, establishment and strengthening of existing indigenous peace building structures is being undertaken. Mediation and dialogue, before eruption of violence, is being advocated as another measure to avoid conflicts flaring up. Other measures include provision of security, disarmaments and control of arms (Koech & Kapchanga, September, 2002). Initiating development programmes and financing of small enterprises especially to reduce unemployment among the youth has been thought to be important, since this reduces idleness and poverty. Similarly veterinary officers have been reported to be using their vast networks with the pastoralists to encourage peaceful coexistence (Mburu, 2005). As for post conflict reconstruction, facilitation of trauma, healing sessions, rehabilitation of destroyed Social amenities, and resettlement of displaced families have been pushed as relevant remedies (ITDG-

EA, 2004).

**Conceptual Framework**

The conceptual framework in this paper is based on the empirical research work of the team of the University of Toronto led by Thomas Homer-Dixon on one hand, and the Environment and Conflicts Project (ENCOP) team led by Bachler (IHDP, June, 1999). Of the two, it is ENCOP that attempts to give a definition of environmental conflict. The definition given is actually a description of what this phenomenon is. According to them:

*“Environmental conflicts manifest themselves as political, social, economic, ethnic, religious or territorial conflicts or conflicts over resources or national interests or any other conflict”.*

For ENCOP research team therefore, environmental scarcity and degradation are not sufficient causes of environmental conflicts. Instead, social, political and economic factors play key causal roles (Bachler & Spillman, 1996). The implication of this position is that deterioration in environmental quality or resource scarcities can exacerbate other socio-economic or political factors that are themselves the proximate causes of violent conflict. In their analysis, ENCOP research team utilizes developmental discrimination to explain the role of environment in the conflict (IHDP, June, 1999). Environmental discrimination is understood to occur when distinct actors, based on their international position and/or their social, ethnic linguistic, religious or regional identity, experience inequality through systematically restricted access to natural capital (productive renewable resources) relative to other actors (Bachler, 1998).

Areas seen most susceptible to conflict are: arid and semi-arid plains (dry lands); mountain areas with highland-low land Interactions; arenas with river basins subdivided by state boundaries, zones degraded by mining; tropical forest belts and poverty clusters of sprawling metropolis (IHDP, June, 1999). The research team categorizes these conflicts into three levels (Ibid). 1) When the environment plays a conflict role between groups within a country; 2) When internal conflicts become internationalized often through population movement; and 3) When interstate conflict arises from the degradation of regional environments or the global conflicts (for example state to state conflict over shared river basins) (ibid). This research team advocates for the presence of institutions, state capacity and civil Society in the facilitation of conflict management and early warning system in environmental conflicts (IHDP, June, 1999). The Thomas Homer- Dixon led research team (Homer —Dixon, 1991) on the other hand identities three conditions of environmental scarcity: I) Decreased quality and quantity of renewable resources (supply induced scarcity); 2) increased population growth or per capita consumption (demand induced scarcity); and 3) Unequal resource access (structural scarcity). These scarcity conditions (Homer -Dixon, 1994) are seen to interact to produce two particularly common phenomena called resource capture and ecological marginalization.

Resource capture occurs when a decrease in the quantity or quality of renewable resources coincide with population growth, thus encouraging “powerful groups” within society to shift resource distribution in their favour. This is said to produce dire environmental scarcity for poorer and weaker groups whose claim to resources are opposed by these powerful elites. Ecological marginalization is a scenario that ensues when population growth and unequal resource access combine to cause migrations to regions that are ecologically fragile, such as steep upland slopes, areas at risk of desertification, and tropical rainforests. High population densities in these areas combine with a lack of knowledge and capital to protect local resources to cause severe environmental damage and chronic poverty (Ibid). To them any and all of these conditions in turn can produce social effects that are linked to violent conflicts (IHDP, June, 1999). Four social effects that are particularly relevant to the study of violent conflicts are: 1) Decrease in agricultural production; 2) Decreased economic productivity; 3) Population displacement; and 4) Disrupted institutions and social relations (Homer-Dixon, 1991). The conflicts that result are understood to be of three types: 1) Inter-state conflict; 2) Sub national or intra-state conflict where scarcity drives population movements; and 3) Sub national or intra-state conflict (civil strife and insurgency) originating from environmental stress that exacerbate economic deprivation and disrupts key social institutions (IHDP, June, 1999). They attribute the presence of these conflicts in developing countries to lack of social institutions (ibid). From this point of view, the resolution of these conflicts appear to be centred on coming up with the necessary institutions, mobilizing resources, and technical expertise.

**3.0 Methodology**

The data presented here is derived from a three-month research study carried out in 2002 in ranches of West Pokot District, Kenya. The guiding methodologies for this research are consultative participation that incorporated 240 sample questionnaires for respondents, 24 sample questionnaires for key informants (ranch officers) and information sharing workshops carried out with chiefs and other relevant stakeholders. The questionnaires targeted specifically the pastoralist Pokots in ranches of Chepareria and Kongelai Divisions Viz: Kongelai, Kanyarkwat, Nakwijit, Chebkobeh, Ortum East, Chesra, Morbus and Serewo. The ranches covered comprise 57.1 percent of the total ranches in the District. The data was analysed with the help of frequency distribution. Chi-Square and correlation co-efficient test was used for hypothesis testing.

**4.0: Findings**

**Presence of human conflicts**

The analyzed data revealed that about sixty-three percent (62.9%) of the respondents experienced human conflict problems in the ranch. On average therefore, it means for every 10 people, 6 had experienced human conflicts in the ranch. The figure on the presence of these conflicts averages even higher (91% from the report of key informants. The key informants’ figure could be higher because it is them who hear and determine land disputes in ranches from aggrieved parties. The forgoing figures portray a much more serious environmentally induced conflict that should be impacting the ranches negatively.

On the nature of the conflict, about thirty-four percent (33.7%) of total respondents reported that others in the ranch forcefully occupied their land; while about thirty three percent (33.3%) reported that they competed with others over grazing land and had problems accessing watering points for their livestock. Again the response by key informants portrays a much more serious conflict problem. This is because about seventy nine percent (79.2%) and about eighty three percent (83.35) stated that competition over grazing land and forceful occupations respectively were serious problems. Loss of human life was the lowest manifestation (3.3%) of the conflict This low manifestation is attributed to the Pokot culture that discourages intra-Pokot rnurders. The culture does this by prescribing huge compensation that is paid to the aggrieved. This Impoverishes anyone convicted of murder. Consequently, intra-Pokot environmentally induced conflicts are not as violent as inter-ethnic conflicts in northern Kenya, involving the Pokot Borana, Samburu and Turkana (ITDC 2004).

**Season and Frequency of Conflicts**

About seventy-seven percent (77.1%) of the respondents reported that this conflict occurred during the long rainy season of April to August. Additional 13.3 percent experienced the conflict in both the long rainy season and the short rainy season of October to February. A small percentage (9.6%) experienced a perpetual conflict. The implication of this scenario is that the intra-Pokot conflict in ranches is season driven mainly occurring in the long rainy season of April-August. These preliminary findings were corroborated by findings on the frequency of the conflict. Data analysis revealed that about sixty-nine percent (68.85%) of respondents experienced conflict once a year; while 18.8% experienced it twice a year. Only a small percentage (8.8%) experienced it three times a year.

The reasons for the occurrence of this conflict varied but all pointed to competition over renewable land based natural resources. Some 21.7% attributed the presence of conflict to sprouting of grass and presence of pasture, and food. They also recorded that in this season, cattle were moved back to the ranches from the dry season grazing in Uganda, highland areas of West Pokot, and Trans Nzoia District. Additional 14.2% stated that the conflict was associated with the ploughing of land, growing of crops and reduced grazing land. Another 13.7% associated the conflict to fencing of land and unrestricted animal movement. The implication of these findings is that much conflict is experienced from the onset of the long rainy season, which commences in April and ends in August. During this time, individual members fence portions of pasture in readiness for the cattle that would be moving from the grazing elsewhere far from the ranches. In this time too, some people would plough land to plant crops. But it is clear that some ranch inhabitants do not watch over their livestock, mostly cattle that stray into other peoples pasture. In the season, boundary disputes also escalate and this is made worse by the presence of Kreswo (a plant of cacti family used as a fence). From the words of respondents, *“one wakes up in the morning to find that Kreswo has been planted as a new boundary”.* During this season of plenty, people, not distracted by scarcity of food, can concentrate on their rights.

The upshot of this is that the rainy season that is supposed to be a condition of security, in some circumstances engenders insecurity by intensifying conflict and competition over pasture, water, and cropland. The conflict appears to be environmentally induced due to the following factors:

1. The conflict is rainy season driven- actually the season is the trigger of it; 2) The season brings plenty which allow people to concentrate on their perceived rights; and 3) The presence of renewable resources: pasture, water and crops add value to the otherwise arid and semi-arid land. This intra-Pokot conflict is therefore different from the inter-ethnic pastoralist conflicts in Northern Kenya, where the conflict is a cute during the dry season (Mkutu, 1999; ITDG-EA, 2003).

**Poverty Levels in the Ranch**

The data reveals that about thirty-six (36.2) percent of respondents did not have any earnings at all. This finding confirms an earlier finding that showed pastoralists in arid semi-arid West Pokot District to be a lot that are in dire need (Dieta, 1987). Only a small proportion (6.2%) had earnings of over 2001. Kenya shillings. With means a monthly income of 774.60 Kenya shillings as the poverty line (Kenya, 1998), 70% of the population was poor. This is yet again a serious poverty situation in the ranches. Since this income is generated from sales of cattle, the implication of this situation is that ranches have not enhanced livestock productivity. Worse still, additional 9.2% had neither goats nor sheep. From the poverty line of the area of 6.2 numbers of cattle and 11.7 number of goats and sheep (Kenya, 1994), additional 52.1 and 3 8.8% were “cattle poor” and “goats/sheep poor” respectively. Similarly, against a poverty line of mean monthly income of 3894.40 Kenya shillings for crop sales, the poor in these categories were 85.8%. Only 3.7% in this category had earnings of over Ksh. 2001. This means that an extra-ordinarily large population in the ranches were “crop poor” Being agro-pastoralists where livelihood depends on crops and livestock, the poverty situation implies that human conflicts, which have been known to be existent, (Kenya, 2001) could be responsible for this scenario. Indeed this appears plausible since 45.4% of respondents recorded that this conflict reduced their assets and income. Additional 37.9% blamed cattle rustling and land disputes for this reduction of income and assets.

**Socio-Economic Factors Associated With the Conflict**

Analyzed data reveals that demand induced scarcity, failure in institutional intervention and structural scarcity are broadly the underlying factors associated with the presence of the conflict. 69.2% and 92.1% of respondents record two factors viz increasing livestock and human numbers respectively as proximate factors associated with this conflict. This finding therefore is in tandem with the Thomas-Dixon and ENCOP model. The implication of this is that the demand for pasture, water and cropland has increased and due to poverty in the ranch, competition for resources ensues. This finding has led to more understanding of environmental conflicts in northern Kenya. Demand driven scarcity is not only restricted to inter-ethnic conflict, but also to intra-ethnic conflict as this study has revealed.

Institutional intervention failure and weakness as a role in the conflict is revealed by the fact that 47.9% of respondents attributed the presence of conflict to lack of a rational grazing system. This finding reveals that some scarcities fuelling conflicts are due to institutional weaknesses. These findings imply that re-activating rotational system of grazing would reduce conflicts in pastoralist areas. A study done in the area (Dietz, 1987) revealed that rotational grazing long ceased being in existence due to drought. The institutional failure is further seen in the sale transaction between some ranch members and outsiders. Because the ranch has not benefited the members, in spite of the legal framework that forbids sale of land by individual members, the sale still goes on due to insecure livelihoods.

The study also revealed that structural scarcity had resulted from unequal access to the resources in the Ranch. This view is reached at because about thirty-five (34.6%) percent of the respondents blamed interference by ranch officers as a critical factor associated with human conflict in ranches. This finding echoes a general finding in the horn of Africa (Smock, 1997), where it has been revealed that small number of opportunistic people with power could be responsible for the human conflict problems, particularly, when they choose to deny others access to resources causing scarcity to the powerless. Lack of routes, another condition enhancing structural scarcity, was recorded by 74.2 percent of the respondents as a factor responsible for the conflict. Lack of routes should be arising from the actions of fencing pasture during the long rainy season. Similarly because crops are grown, some routes used by pastoralists to access pasture and water are closed. What these preliminary findings reveal is that environmental scarcity in the ranch is not on their own responsible for ranch conflicts, they need certain socio-economic factors.

**3.0: Discussion**

In this section the results of chi-square and correlation coefficient test are discussed in light of the impact of the environmental conflict on the poverty situation in the ranches; as well as proximate factors associated with the conflict.

**Role of the Conflict on Poverty Situation**

Hypothesis testing to understand association between average monthly income and the presence of conflicts revealed a Chi-square value of 10.278 with 2 degrees of freedom and significance level of 0.00. The implication of this finding is that there was a strong association between environmentally induced conflict and the presence of average monthly income. The negative correlation (-0.192) between the two variables further reveals that when the conflicts increased in ranches, then average monthly income decreased. This implies that environmentally induced conflicts in ranches were credited with increasing poverty levels in ranches of West Pokot.

Consequently the outcome of this study has led to more understanding of rural poverty in West Pokot. Lack of credit facilities, poor road networks and inadequate business skills has been blamed for poverty in group ranches. Similarly, insecurity, inadequate markets for group ranch livestock resources (Kenya, 2002) and drought (Diets, 1987) have all been thought responsible for this poverty. Nevertheless as this study has shown, environmentally induced conflicts too are a major contributor to this poverty.

**Factors Associated With Conflict**

Chi-square results indicated that there was a significant association between the dependant variable “presence of ranch conflicts” and six independent variables: Population increase, increasing livestock numbers, lack of routes, interference by ranch officers, sales of land to outsiders, and lack of rational grazing system. Increasing human population had a chi-square value of 12.747 with 6 degrees of freedom with a significant level of 0.005. The finding implies that increase in human population is a serious problem enhancing conflicts in ranches. This increase has set in motion a demand-induced scarcity of renewable resources (Homer-Dixon, 1991). But then the negative correlation (r=-0.08) between the dependant variable and increasing population imply that the more the increase in human population the less the human conflicts in ranches. The implication of this is that as human population in ranches increase the ranch community resolves the conflict by subdividing the ranch into individual titles, put individual boundaries that come to be respected and this leads to less human conflicts. Consequently to resolve the current environmental conflict in ranches in West Pokot, ranches should be subdivided into individual title.

Together with the foregoing, is increasing livestock numbers. The chi-square for this recorded a value of 32.838 with 3 degrees of freedom with a significance of 0.000. Moreover the correlation

was negative (r = -014). This implies that with an increase in livestock numbers there is a decrease in the presence of conflicts. This relationship is explainable since, a study (Bollig,1990) has shown that increasing livestock in arid and semi-arid ecosystems guarantee the presence of grazeable vegetation that lead to even spread of livestock thus minimizing the possibility of conflicts arising. On the other hand, decreasing number of livestock has been known to leave land ungrazed; this ungrazing causes immediate loss of production and degradation in the long run. This is because it results in ungrazeable vegetation, which replaces grass. Water points are also degraded by not being used (Kratli & Swift, 2002). This shrinkage in grazing and water availability- that is created- in turn causes abnormal concentration of animals in few areas with pasture increasing the presence of conflicts (Hassan, 1997). The implication of this finding is that one measure for resolving this conflict is to have more livestock reside in the ranch areas.

Lack of routes as an independent variable when tested against the dependant variable: “presence of conflict” yielded a chi-square value of 14.380 with 3 degrees of freedom and a significant level of 0.002.This means that there was a strong association between the occurrence of the conflict and lack of routes in the ranch. This finding reveals the presence of environmental discrimination or restricted access to natural capital (productive renewable resources) relative to others (Bachelor, 1998) or what Homer-Dixon (1994) calls structural scarcity. The negative correlation (r = - 0.05) implies that the more the routes were opened, the lesser the presence of the conflicts. This points out that to resolve environmental conflicts in ranches of West Pokot, the problem of structural scarcity must be addressed. This will call for removal of unequal access to water and common pasture. Included in the ranch should be the entire necessary infrastructure if the key to this problem should ultimately be found. Indeed the design of ranches in Kenya calls for adequate infrastructure (Pratt & Gwynne, 1977).

Lack of a rational grazing system yielded a chi-square value of 19.409 with 3 degrees of freed.otn and a significance level of 0.00. This finding reveals a weakness in the pastoralist development initiative, not just in West Pokot alone, but in Kenya as a whole. This is because rotational grazing collapsed in the 1970s due to drought (Dietz, 1987). Consequently the environmental scarcity leading to conflict here is *“intervention omission scarcity*”. Had rotational grazing been in existent, this scarcity could not be available, indeed this position appears plausible since the correlation between the two variables is positive (r=0.21). Addressing this scarcity problem will involve channeling more resources particularly water to ranches. This is a gigantic task since developing countries are said to have little resources to address this scarcity. Secondly, the conflicts can be reduced by encouraging keeping of goats, camels and sheep that are better placed to survive the harsh conditions of the range lands (Amuguni, 2003).

Interference by ranch officers as a factor that is associated with the presence of conflicts yielded a chi-square value of 33.33 0 with 3 degrees of freedom arid a significance level of 0.00 Revealing this was a very strong factor associated with the presence of conflicts. The implication of this is that the respondents perceived ranch officers to be partisan and unjust to some of them. This finding is not new in the ranch setting. For instance in Narok District, among the Maasai pastoralists, many families within group ranches have complained of lack of transparency in the management of ranches by the committees. (Durraiappah; Ikiara; Manundu Nyangena & Sinange, 2000). Moreover, allegation of corruption had increased. Increasingly because of this; individual Maasai families are demanding to replace the ranch system with individual title.

But the negative correlation (r = -0.28) between the two variables implies that the more the interference by ranch officers, the lesser the presence of human conflicts in ranches. This means that what the respondents who are the ranch members perceived to be interference is actually attempts of averting the conflicts in ranches. The concept of resource capture (Homer-Dixon, 1994) can be used to explain this phenomenon. In the group ranch, a decrease in the quantity or quality of renewable resources coincides with population growth. As opposed to small powerful groups within society shifting resource distribution in their favour, in the ranch setting, majority strive to capture the resources at the expense of others. As they do this, they loathe the authority of the committee whom they blame for interference. But the committee because of being the managers of the group ranch should intervene to minimize the scenario of resource capture spree. This intervention reduces conflicts. As noted in a study (Kratli & Swift, 2002), the group ranch programme was intended to transform communal grazing lands into deeded holdings with individual rights (ibid). However a combination of factors have threatened to create a vacuum of authority (Sylla, 1994). The resolution of this conflict therefore hinge on encouraging ranch officers to be more transparent while empowering them further. This is because it appears, like chiefs, ranch officers can be effective at local/ grassroot governance (Mkutu, 1999).

Selling of land to non-ranch members as a significant factor associated with the conflict yielded a chi-square value of 18.800 with 3 degrees of freedom and significant level of 0.000. Selling by individual members of ranch land violates the legal framework in which ranches operate. Further, the negative correlation (r = -0.002) between the presence of conflicts and selling of land to non-ranch members imply that the more the sales of land, the lesser the presence of conflicts. This scenario should still be understood from the resource capture spree phenomena in the ranch. As part of these phenomena, some members opt to sell the land either for the sake of monetary gain, or because of some peculiar characteristics of pastoralists that anthropologists have been able to explain: that these people believed that the land they sold would still be available for their livestock during their critical periods (Bruce, 1988). Another reason could be the “host-guest” practice, which recognises newcomers as guests who are offered rights on temporary basis while the original habitants retain ultimate authority over land use and ownership (Hussein, 1998). In West Pokot as present conflicts demonstrate, pastoral beliefs were ill founded for this has exacerbated environmentally induced conflicts in ranches; since other members of the ranch loathed the external buyers. But these buyers are mostly more economically powerful than most of the ranch owners and so one dare not transgress into the land that is the object of a sale transaction. With more of this type of buying therefore, the conflict, generated by resource capture spree ironically is reduced as more and more external buyers set in.

**4.0: Conclusion**

This study made use of the conceptual framework of the empirical research of the University of Toronto and the Environment and Conflict Project (ENCOP) of the Swiss Institute of Peace Studies. The two teams are in agreement that environmental scarcity and degradation are not sufficient causes of environmental conflicts. Instead, social, political and economic factors play key causal role. (Bachler & Spillman, 1996; Homer Dixon, 1994). For ENCOP research team, the critical issue is two-pronged. The first is social and political mal-development and the second is environmental discrimination (Bachler, 1998). As for the Homer-Dixon (1994) research team on the other hand, the problems are resource capture and ecological marginalization.

From this conceptual framework the critical issue that is applicable to the intra-pokot environmental conflict is resource capture. This phenomenon is as a result of two coinciding circumstances in the ranch. The first is water and pasture degradation. The second is population increase. The pasture and water degradation is in part an upshot of failure in group ranch as an intervention because of collapsed rotational grazing system (Dletz, 1987). The resultant circumstances produce what is called degradation-demand induced scarcity. This acute scarcity leads to serious poverty situation among the Pokot in the ranches.

In the process, majority of ranch members develop apathy towards the ranch and become involved in the resource capture spree mainly of renewable land-based resources, which climax in the rainy season, which act as a trigger of the conflict. In the process of resource capture, some degree of environmental discrimination is created (Bachler & Spillman, 1996) or what Homer- Dixon (1994) calls structural scarcity. This occurs when routes of access to common pasture and water is blocked by cultivation and fencing. The study being located in a semi-arid area in West Pokot confirms the Thomas Homer-Dixon (1994) research team finding that dry lands are crisis areas in environmental conflicts. The study has also revealed that contrary to the inter- ethnic conflict in northern Kenya, intra Pokot conflict occurs in the rainy season.

**Figure 1: Interaction of Factors to Produce Conflict in Ranches of West Pokot**

Pasture & water Degradation

Population

increase

Institutional Weakness

Degradation-Demand induced scarcity

Resource Capture

Ranch Conflicts

**Recommendation:**

This study makes the following recommendations. First the problem of pasture degradation should be addressed. To do this, rotational grazing system should be restored. Similarly, more resources and capital should be mobilized for ranch development to deal with scarcity problem. This measure will reduce conflicts. The ranches especially those whose subdivision will not compromise land productivity should have subdivision effected. Equally the sheep, camels and goats that utilize a wide range of forage if kept will reduce the conflicts. Lastly, guaranteeing the presence of infrastructure should reduce scarcity arising from discrimination in access to common pasture and water.

**References**

Almagor, U, (1978). *Pastoral partners affinity and bond partnership among the Dassanech of South Western Ethiopia*. Manchester: Manchester University Press.

Amisi, B.K, (1997). *Conflicts in the Rift Valley and Western Kenya. Towards an Early Warning Indicator Identification.* A Paper prepared to US AID Conference on conflict resolution in the greater horn of Africa, Nairobi, and June 1997.

Arnuguni, H.M, (2001, March). *Promoting gender equally to improve the delivery of animal health care services in pastoral communities*: A gender study focusing on the Turkana and Pokot of Northwest Kenya. Retrieved August 18, 2004 from O.A.U.

 Website: http: //www. Cabinet.net /1 3abs % 28 gender % 29.htm

Bachler, G. & Spillman, K.R. (Eds.) (1996). *Environmental degradation as a cause of war*. Vol. 2-3. Zurich: Rutgers Verlag

Bachler, G. & Spillman, K.R. (1998). *Why environmental transformation causes violence*. Environmental change and Security Project Report 4. Washington D.C.: Woodrow Winston Centre. pp 24-44

Beaten, A.C. (1950). Record of the Toposa Tribe, *Sudan notes and records* xxxx 1 pp 129 – 132

Binsbergen, W. (2002). Violence in Anthropology. Theoretical and Personal Remarks.

 *Ethnicity, identity and politics in Africa*. Retrieve November 11, 2004 from Ethnicity Identity and Politics in Africa website http: [www.shikanda](http://www.shikanda) net/ethnicity/violence.htm

Blake, G. (1997). Imperial boundary making the Dairy of’ Captain Kelly and the Sudan Uganda Boundary commission of 1913 Oxford: British Academy.

Bollig, M. (1990). *Ethnic conflicts in North-western Kenya*: Pokot —Turkana raiding 1969-1984 Zeischriff fur ethnologie 115 pp 73-90.

Bruce, J. W. (1988). *A perspective in indigenous land tenure systems and land Concentrations.* In R.E. Downs & S.P. Reyna (Eds.), Land and Society in Contemporary Africa Hanover: University Press of New England.

Chesos, R. (January 12, 2005). *Pastures turned into killing fields.* Daily Nation newspapers limited: Nation Media Group.

Dietz, T. (1 987). Pastoralism in dire straits. *Survival strategies and external intervention in a semi-arid region at the Kenya Uganda border:* Western Pokot 1900-1986 Amsterdam: Voor Sociale Geographic.

Driberg, J. (1922). *Preliminary Account of the Didinga*. Sudan Notes and Records. vi pp.

 129-132.

Durraiappah,A.K.; Ikiara, G.; Manundu, M.; Nyangena W.; Sinange, R. (2000). *Land tenure,*

 *land use, environmental degradation and conflict resolution*. A PASSIR Analysis for

 Narok District Kenya. Working Paper No. 33, August 2000. Amsterdam and London:

 International Institute for Environment and Development and Institute for

 Environment Studies.

Goldsmith, P. (1997). *Conflict and Conflict Management in the horn of Africa. Cattle Khat and Guns. Trade, conflict and insecurity in Northern Kenya’s Highland Lowland interface, Aidfor Pastoral Peoples Education and Livelihood*. Isiolo: Appeal— Kenya.

Hassan, Z.M. (1997). *The role and effects of Somali pastooralist in conflict*. Paper presented to the workshop promoting land rights of pastoralists in the horn of Africa

Hiroshi, M. (1994). *Annexation and assimilation*: Koegu and their neighbours in K. Fukui & J, Markakis (Eds,), Ethnicity, and conflicts in the horn of Africa pp 63-92 London:

 James Curray.

Homer-Dixon, T.F. (1991). *On the threshold: Environmental changes as cause of acute conflict*. International Security, 19(l) 5-40

Homer-Dixon, T.F. (1994). *Environmental scarcities and violent conflicts. Evidence from cases*. International security, 16(2), 76-116.

Hussein, K. (1998). Conflict between farmers and herders in the Semi-arid Sahel and East Africa. *Pastoral tenure series No. 10;* Dry land Programme. London: International

 institute of Environment and Development.

Ibrahim D. & Jenner, J. (1996). Wajir community based conflict management. Paper presented to the USAID conference on conflict resolution in the great horn of Africa, June 1997.

Institute of Peace and Conflict Studies IPCS (2003). Armed conflicts report 2004. Ontario,

 Canada: Institute of Peace and Conflict Studies, Grebel College

Integrated Regional Information Networks IRIN (2001). T*urkana leave Karamojong to avoid*

 *disarmaments.* Retrieved on November 11, 2004, from Relief web: http//www.relief

 web int/w/rwb/nst/48 of a 873b88 bbc 12564 + 6004 c 8 ad/ a49e/127d 88525 6b1

 00 6 e5c5c?

Intermediate Technology Development Group-Eastern Africa ITDG-EA (2004). Traditional

 Conflict resolution mechanism, DTP Intermediate Technology Development Group-

 Eastern Africa 1TDG-EA (2003). Conflict in Northern Kenya: A focus on internally

 displaced Conflict victims in Northern Kenya, DTP.

International Human Dimension Programme (IHDP) (June, 1999). IHD Report No. 11-

 GECKS Science Plan. Bonn: IHDP. Retrieved February 2, 2005 from http://

 [www.ihdp.Uni.bonn.de/html/publication /report/report-//](http://www.ihdp.Uni.bonn.de/html/publication%20/report/report-//)

Kamenju, J. Mwachofi S. & Ewaragu F. (2003). *Terrorized citizens*: Profiling small arms

 and insecurity in the North Rift of Kenya. Nairobi: Security Research and

 Information Centre.

Kenya Human Rights Commission (2001). *Raiding democracy*: *The slaughter of Marakwet*

 *in the Kerio Valley* Nairobi KHRC

Kirkby, J. & Moyo, S. (August, 2000). *Environmental, livelihoods and entitlements.*

 *Degradation and Development;* University of Northumbria at Newcastle and

 SAPES Trust, Zimbabwe.

Koech & Kapchanga, L, (September 12, 2002). Disarm Pokot, urges Uganda official Nation

 Newspapers. Retrieved August 18, 2004, from Nation Group website http://

 www.Nationaudio.com/News/daily Nation/l20 2002/news, news 19.

Kratli, S. & Swift, J. (2002, October). *Understanding and managing pastoral conflicts*.

 Retrieved August 18, 2004, from [http://www.eldis.org/static/doc 8749.htm](http://www.eldis.org/static/doc%208749.htm)

Lamphear, J. (1994). *The evolutions of Aleker new model armies*: Jie and Turkana in K.

 Fukui & J. Markakis (Eds.), Ethnicity and Conflicts in the Horn of Africa @ pp 63-

 92. London: James Curray.

Libiszewski, S. (1992). *What is environmental conflict?* Environment and Conflict Projects

 (ENCOP), Occasional paper No. 6. Zurich: Centre for Security Studies and Conflict

 Research.

Mbogo, S. (2003). Pastoral shootouts and environmental conflict. *Towards Freedom online*

 *magazine;* a progressive perspective of world events. Retrieved November 11, 2004

 from towards freedom website: http://www.towardfreedom.com/2003/dec o3/pastoral

 shoot.htm

Mburu, N. (2003). Delimination of the Ilemi Triangle: A history of abrogation of

 responsibility. *The Online Journal for Africa Studies*. Retrieved November 11, 2004,

 from African Studies Quarterly 6 No. 4 website: <http://webafrica.utl.ed/aq/v7;az.htm>

Mkangi, K. (1997). *Indigenous social mechanisms of conflict resolution in Kenya: A*

 *contextualized paradigm for examining conflict in Africa.* Nairobi: University of

 Nairobi.

1. Mr Bramwel Matui is a Land Adjudication/ Settlement Officer in Narok District [↑](#footnote-ref-1)
2. Dr Joshua Kwonyike is a lecturer in the Department of Development Studies [↑](#footnote-ref-2)