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

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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 a dispute of ownership of livestock and land (ITDG-EA, 2004). On the other hand, Conflict resolution refers to measures aimed at minimising, 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 21st century are environmental degradation, impoverishment and the insecurities caused by both of these factors (IHDP, June 1999). Indeed, the concept of 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). Increasingly being accepted 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 ranches' inadequacy.

The paper begins with a review of the 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 conceptualisation of the environmental conflict problem and the implications of this. Then it delves into methodology, preliminary findings of data analysis, and the discussions of hypothesis testing. Finally, the paper recommends management of 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 who 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, the Samburu, the Somali, the Borana and the 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 proliferation 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), commercialisation 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 (Mkuru, 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 (de facto) and Sudan (claimed) (ibid). The Triangle is home to five ethno-linguistic communities: The Turkana, Digida, Toposa, Inyangombe and Dassanech. Most of these communities have been known to graze their cattle in the Triangle during the dry season, leading to serious competition and conflict that result in killing, 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 a serious socio-economic impact on the inhabitants (ITDG-EA, 2003). In total, 164,457 people have been displaced; the 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 jeopardised; and across the region, the scenario is the same: children have dropped out of 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 in the 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, the establishment and strengthening of existing indigenous peace-building structures is being undertaken. Mediation and dialogue, before the eruption of violence, are being advocated as another measure to avoid conflicts flaring up. Other measures include the provision of security, disarmament 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 the 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 the 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 utilises 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 as most susceptible to conflict are: arid and semi-arid plains (dry lands); mountain areas with highland-lowland 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 categorises these conflicts into three levels (Ibid). 1) When the environment plays a conflict role between groups within a country; 2) When internal conflicts become internationalised, 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 systems in environmental conflicts (IHDP, June 1999). The Thomas Homer- Dixon-led research team (Homer —Dixon, 1991), on the other hand, identifies 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 marginalisation.

Resource capture occurs when a decrease in the quantity or quality of renewable resources coincides 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 is opposed by these powerful elites. Ecological marginalisation 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 exacerbates economic deprivation and disrupts key social institutions (IHDP, June 1999). They attribute the presence of these conflicts in developing countries to a lack of social institutions (ibid). From this point of view, the resolution of these conflicts appears to be centred on coming up with the necessary institutions, mobilising resources, and technical expertise.

3.0 Methodology

The data presented here is derived from a three-month research study carried out in 2002 in the 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 pastoral Pokots in the ranches of Chepareria and Kongelai Divisions, Viz, Kongelai, Kanyarkwat, Nakwijit, Chebkobeh, Ortum East, Chesra, Morbus and Serewo. The ranches covered comprise 57.1 per cent of the total ranches in the District. The data was analysed with the help of a frequency distribution. Chi-Square and correlation coefficient test was used for hypothesis testing.

4.0: Findings

Presence of human conflicts

The analysed data revealed that about sixty-three percent (62.9%) of the respondents experienced human conflict problems in the ranch. On average, therefore, it means that 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 they who hear and determine land disputes in ranches from aggrieved parties. The foregoing 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 report 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 murders. 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. An 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 the sprouting of grass and the 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, the highland areas of West

Pokot, and the Trans Nzoia district. An 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 with the 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. At this time too, some people would plough land to plant crops. But it is clear that some ranch Inhabitants do not care for their livestock, mostly cattle that stray into other people's pasture. In the season boundary disputes also escalate, and this is made worse by the presence of Kreswo (a plant of the 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 the scarcity of food can concentrate on their rights.

The upshot of this is that the rainy season, which 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: The conflict is rainy season-driven, actually the season is a trigger of it; 2) The season brings plenty, which allows 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 acute 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 the arid semi-arid West Pokot District to be a lot who starve with no assets other than their own bodies (Dieta, 1987). Only a small proportion (6.2%) had earnings of over 2001 Kenya shillings. With 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, an 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

a 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 2001 Kenya shillings. This means that an extraordinarily large population in the ranches were "crop poor" Being agro-pastoralists whose livelihood depends on crops and livestock, the poverty situation implies that human conflicts, which have been known to exist (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. An additional 37.9% blamed cattle rustling and land disputes for this reduction of income and assets.

Socio-Economic Factors Associated with the Conflict

Analysed 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 the lack of a rational grazing system. This finding reveals that some scarcities fueling conflicts are due to institutional weaknesses. These findings imply that reactivating the rotational system of grazing would reduce conflicts in pastoralist areas. A study done in the area (Dietz, 1987) revealed that rotational grazing had 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 the 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 is reached 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 a 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 arise 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 its own responsible for ranch conflicts; it needs certain socio-economic factors.

3.0: Discussion

In this section, the results of the chi-square and correlation coefficient tests 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 Conflict in the Poverty Situation

Hypothesis testing to understand the association between average monthly income and the presence of conflicts revealed a Chi-square value of 10.278 with 2 degrees of freedom and a 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 the average monthly income decreased. This implies that environmentally induced conflicts in ranches were credited with increasing poverty levels in the 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 have 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 are a major contributor to this poverty.

Factors Associated with Conflict

Chi-square results indicated that there was a significant association between the dependent 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 rotational grazing system. The 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 an increase in the human population is a serious problem, exacerbating 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 dependent variable and increasing population implies that the more the increase in human population, the less the human conflicts in ranches. The implication of this is that as the human population in ranches increases, the ranch community resolves the conflict by subdividing the ranch into individual titles, putting individual boundaries that come to be respected, and this leads to fewer human conflicts. Consequently, to resolve the current environmental conflict in ranches in West Pokot, ranches should be subdivided into individual titles.

Together with the foregoing, there is an increase in 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 guarantees the presence of grazeable vegetation that leads to an even spread of livestock, thus minimising the possibility of conflicts arising. On the other hand, a 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 a 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 dependent 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 the 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 less the presence of the conflicts. This points out that to resolve environmental conflicts in the ranches of West Pokot, the problem of structural scarcity must be addressed. This will call for the 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 is ultimately found. Indeed, the design of ranches in Kenya calls for adequate infrastructure (Pratt & Gwynne, 1977).

Lack of a rotational grazing system yielded a chi-square value of 19.409 with 3 degrees of freedom, 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 existence, this scarcity could not have been available; indeed, this position appears plausible since the correlation between the two variables is positive (r=0.21). Addressing this scarcity problem will involve channelling more resources, particularly water to ranches. This is a gigantic task since developing countries are said to have few resources to address this scarcity. Secondly, the conflicts can be reduced by encouraging the 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 33.330 with 3 degrees of freedom and a significance level of 0.000. This implied 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 a lack of transparency in the management of ranches by the committees. (Durraiappah, Ikiara; Manundu, Nyangena & Sinange, 2000). Moreover, allegations 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 less 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 to avert 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, the majority strive to capture the resources at the expense of others. As they do this, they loathe the authority of the committee, which they blame for interference. But the committee, because of being the managers of the group ranch, should intervene to minimise the scenario of a 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 has threatened to create a vacuum of authority (Sylla, 1994). The resolution of this conflict, therefore, hinges 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).

The 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 a 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 the selling of land to non-ranch members implies that the more the sales of land, the less 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 a temporary basis while the original inhabitants 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 the resource capture spree ironically is reduced as more and more external buyers set in.

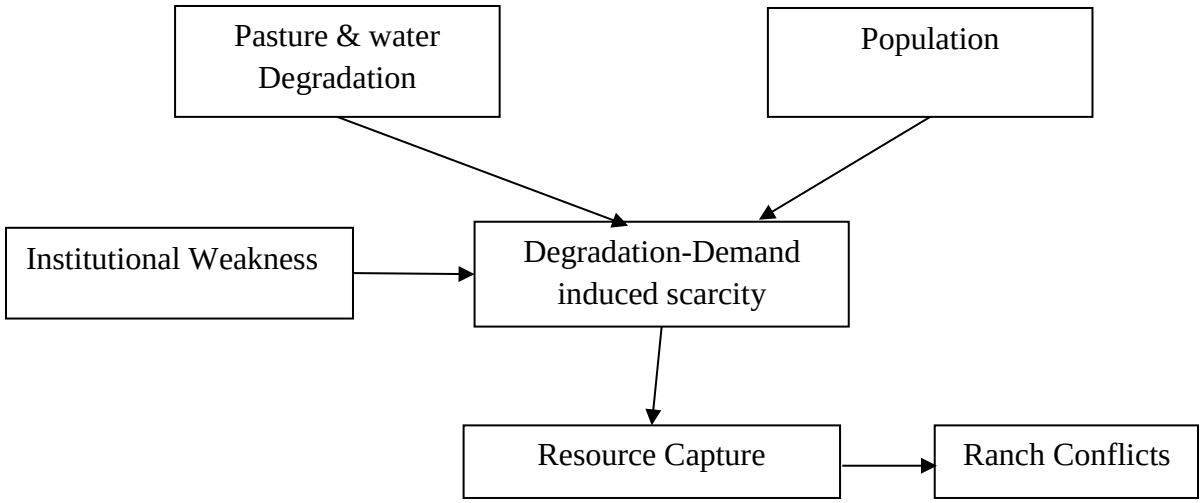
4.0: Conclusion

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 a key causal role. (Bachler & Spillman, 1996; Homer Dixon, 1994). For the 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 marginalisation.

From this conceptual framework, the critical issue that is applicable to the intra-Pokot environmental conflict is resource capture. This phenomenon is a result of two coinciding circumstances on 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 the group ranch as an intervention because of the collapsed rotational grazing stem (Dletz, 1987). The resultant circumstances produce what is called degradation-demand-induced scarcity. This acute scarcity leads to a serious poverty situation among the Pokot people.

In the process, the 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 acts 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 are blocked by cultivation and fencing. The study, being located in a semi-arid area in West Pokot, confirms Thomas Homer-Dixon's (1994) research team's 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



Recommendation:

This study makes the following recommendations. First, the problem of pasture degradation should be addressed. To do this, the rotational grazing system should be restored. Similarly, more resources and capital should be mobilised for ranch development to deal with the scarcity problem. This measure will reduce conflicts. The ranches, especially those whose subdivision will not compromise land productivity, should have subdivisions effected. Equally, the sheep, camels and goats that utilise 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 for the USAID Conference on conflict resolution in the Greater Horn of Africa, Nairobi, June 1997.

Arnuguni, H.M. (2001, March). *Promoting gender equality 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 net/ethnicity/violence.htm

Blake, G. (1997). Imperial boundary making the Diary 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 on 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. (1987). 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 the 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, Aid for Pastoral Peoples Education and Livelihood*. Isiolo: Appeal— Kenya.

Hassan, Z.M. (1997). *The role and effects of Somali pastoralists 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 a 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 the Karamojong to avoid disarmament.* Retrieved on November 11, 2004, from Relief Web: http//www.reliefweb 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-//

Kamenju, J. Mwachofi S. & Ewaragu F. (2003). Terrorised *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 the 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

Lamphear, J. (1994). *The Evolution of Ateker's 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 on world events. Retrieved November 11, 2004 from Towards Freedom website: http://www.towardfreedom.com/2003/dec o3/pastoral shoot.htm

Mburu, N. (2003). Delimitation of the Ilemi Triangle: A history of the 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 contextualised paradigm for examining conflict in Africa.* Nairobi: University of Nairobi.