Pastoral Conflict, Emerging Trends and Environmental Stress in Nyangatom, Southern Ethiopia
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Abstract
This study examined the dynamics of conflict, emerging trends and relationship between inter-pastoral conflicts and environmental changes in Nyangatom, Southern Ethiopia. The study employed a qualitative approach and exploratory case study research design. The study revealed that inter-pastoral conflicts stem from multiple and compounding dynamics. The environmental change has escalated intense inter-pastoralists’ contestation and conflicts, including cross-border conflict, on the scarce and fast-depleting natural resources. Indeed, there is a causal link between inter-pastoral conflicts and environmental changes. In this regard, the environmental factor has uniquely affected the Nyangatom due to the drying of Kibish River and rapid invasion of Prosopis–Juliflora in their key grazing lands. In response to environmental stresses as part of the traditional copying mechanism, the Nyangatom cross border deep into South-Sudan to their ethnic kin of Toposa and into Kenya that usually causes frequent cross-border conflicts with Turkana pastoralists. Irrespective of discernible risk of conflicts, they used to migrate to Mursi and Surma territories that caused conflict. And yet, the Nyangatom has often engaged in frequent conflicts with Dasanach. The study suggests alternative livelihood options and an understanding of the complex conflict dynamics in view of the cause-effect relationships for future management of inter-pastoral and cross-border conflicts in the region.

Keywords: Nyangatom, Pastoralism, Conflict, Emerging trends and Environmental stress
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Pastoralism in all its forms is more than just a mode of production. It involves a certain mode of social organization and cultural patterns and practices (Markakis, 2004, p. 4). It is an economic system that is based on raising livestock and hence, getting access and use of natural resources, like water and pasture, play a fundamental role in pastoral livelihood, identity and conflict. In the Horn of Africa, the escalation of pastoral conflicts is linked to environmental stress and subsequent droughts (Schilling et al., 2012; Leff, 2009). Sub–regionally, the Karamojong Cluster of Horn of Africa has been ridden by inter–pastoral and cross–border conflicts (USAID, 2002). As noted by USAID (2002, pp. 6-8), the resource scarcity combined with other socio–economic and political factors have made this Cluster a very volatile and conflict prone area in Africa.

The Karamojong Cluster is an ethno–geographic designation of more than fourteen ethnic groups, which share mutually intelligible language, practice common cultural values and religious traditions and means of livelihood (Asnake and Fana, 2012, p. 123; Gebre, 2012b, p. 352; Mburu, 2001, p. 151). As described by Asnake and Fana (2012, p. 123), these ethnic groups live along the border region of North-West Kenya, North-East Uganda, South-West Ethiopia and South-East of South-Sudan. Most of these groups also routinely cross from one side to the other, while sometimes straddle the border (Mkutu, 2007). Despite close affinities, some of the groups often engage in violent cross-border conflicts (Gebre, 2012b). These pastoral ethnic groups have also been politically and economically marginalized that led to extreme poverty and conflicts. The Nyangatom is the only pastoral groups in Ethiopia that belongs to the Karamojong Cluster and speaks language similar to Turkana of Kenya, Toposa of South-Sudan, Jie, Dodoth, Bokora, Matheniko, Pian and Karimoja of Uganda (Gebre, 2012b, p. 352; Mburu, 2001). Although their inter–pastoral relations are characterized by solidarity and hostility, these pastoral groups are considered as the core members of the Karamojong Cluster (Gebre, 2012b).

Existing scholarly studies (USAID, 2002; Niamir-Fuller, 1999; Mkutu and Wandera, 2013; CEWARN, 2004) have shown that there is a link between globally changing climatic patterns, ecological fragility and natural resource scarcity, as well as livelihood insecurity and conflict in the Karamojong Cluster. The political marginalization and isolation of pastoral groups in the Cluster is conveyed in weak or lack of strong local government institutions capable to maintain security, politicization of conflict, and completion over scarce resources and disregard of customary structures of authority (USAID, 2002, pp. 6-8). Within the Karamojong Cluster, inter–pastoral conflicts are almost endemic in the Lower Omo Valley.
Southern Ethiopia (Gebre, 2012a, p. 5). The majority of those living in the Ethiopian border area connecting Kenya and South Sudan are pastoralists. Hence, their social and economic lives are structured around the maintenance and wellbeing of their livestock which serves as the primary asset and source of sustenance (Leff, 2009).

The causes of pastoral conflicts in the Lower Omo Valley of Southern Ethiopia are multifaceted. A significant number of researchers (such as Gebre, 2012a; 2012b; Schlee, 2010; Teshome, 2010; Yohanes et al., 2005; Sagawa, 2010; Almagor, 1979) have devoted considerable efforts to the study of pastoral conflict causes and consequences. Nonetheless, far from being unified, the study of inter-pastoral and cross-border conflicts remain fragmented between disciplinary boundaries. These studies emphasize the historic animosity and enmity, the growing pressure over fast dwindling resources and certain socio-cultural factors as driving forces behind pastoral conflicts. Focusing on the Nyangatom, this study contends that the conflict dynamics in the Lower Omo Valley seems to take a new dimension due to environmental changes. As emphasized in this study, it is resource depleting impact of environmental stress due to changing patterns of climatic conditions combined with other essential factors that trigger the Nyangatom conflicts with its neighbors.

Conceptually, this study follows certain line of argument to provide a context for clear and broader understanding of conflict dynamics, emerging trends and environmental stress in the Nyangatom conflicts with its neighbors. The Nyangatom’s internal demographic expansion in a very fragile environment that has often been deadly hit by frequent droughts combined with a host of other emerging issues exacerbates inter-pastoral contestation and conflicts. Given lack of strong local government institution, fragile nature of physical environment, historic animosity, climate change adversaries and lack of access to rangeland resources conflicts are expected. As a key copying mechanism, mobility is the single most important pastoralists’ adaptation strategy to the spatial and temporal variability of rainfall and rangeland resources (Adano, 2012, p. 307). Theoretically, when droughts intensify, people and livestock concentrate in resource-rich areas or move into the areas that they had never been before in search of pasture and water. It is at this moment that drought and environmental stress induced resource scarcity related pastoral conflicts surface in the study area.

In the widest sense, due to the adverse impacts of environmental changes and subsequent droughts, access to and control over existing resources are crucial factors for the occurrence of pastoral conflicts in Southern Ethiopia. Existing studies (Yohanes et al., 2005; Teshome, 2010; Gebre, 2012a; 2012b; Sagawa,
Temesgen Thomas Halabo and Taddesse Berisso (2010) have provided insight for understanding ‘conflict that matters’ (i.e., inter-pastoral and cross-border conflict dynamics) and consequences in the Lower Omo Valley of Southern Ethiopia. However, none of these studies have been able to pinpoint the magnitude of environmental stress and conflict dynamics that sustains conflict and trends in the context of the Nyangatom. In light of this, the study has the following two key objectives. Firstly, the study examines the Nyangatom conflicts with its neighbors and their dynamics and emerging trends that sustain conflict. Secondly, the study investigates how environmental stress due to natural resource depletion, frequent droughts, environmental degradation and demographic expansions ignite pastoral conflict between the Nyangatom and its neighbors.

This study is organized into six parts beginning with the description of the study areas. Then, it discusses the research methods of the study. The third part deals with the inter-pastoral conflicts and their dynamics between Nyangatom and its neighbors, mainly Dasanach and Turkana of Kenya. The fourth part focuses on the emerging trends that sustain pastoral conflicts. The fifth section discusses the impacts of environmental stress in igniting pastoral conflicts. The last section is devoted to the conclusion of the study.

Description of the study area
The Nyangatom is found in the South Omo Zone which is one of the many Zones in the Southern Nation, Nationalities and Peoples Regional State (SNNPRS). The SNNPRS is one of the 10 regional states of Ethiopia and uniquely embraces the greatest ethnic diversities in the country (Temesgen, 2011, p. 154). The present politico-administrative compartment of South Omo Zone, into which over sixteen officially recognized ethno-linguistic groups are squeezed, is part of what Schlee (2008) described as a ‘fragmentation belt’ in Southwest Ethiopia in which not only many small languages, but also languages of entirely different families have apparently existed for thousands of years. In the South Omo Zone, more than half of the ethnic groups, including the Nyangatom, live in the Lower Omo Valley, which is characterized by extreme ecological features, such as low altitude, high temperature, low rainfall and water scarcity. Of the four language families found in Ethiopia - Semitic, Cushitic, Omotic, and Nilo-Saharan, all but the Semitic language families are represented in the Zone (Schlee, 2008). As a result, the word ‘exotic’ is very commonly and quite fittingly used in ethnographic and anthropological literature to describe the degree of ethnic diversity in this narrow tribal corridor (Tsega-Ab, 2005).
The Nyangatom speak language that belongs to the Nilo-Saharan language family. They live in Southwestern Ethiopia in the border region between Ethiopia, Kenya, and South Sudan. According to CSA (2007) national census, the population of the Nyangatom was 25,252 and the land area inhabited by the group was estimated at 2,183.6 km sq. Until 2006, the Nyangatom was part of the administrative unit of Kuraz woreda. Following the 2006 administrative restructuring, they were elevated to a woreda level of self-governance with its capital at Kangaton, some 950 km Southwest of Addis Ababa, capital of Ethiopia. The Nyangatom woreda consists of three minority groups: Nyangatom, Muguji and Murle. During this study, district or woreda is divided into 20 units called kebele that is the lowest administrative unit in Ethiopia. Except for Kangaton, which hosts a few migrants and local people, all other kebeles are inhabited by the Nyangatom and other subsumed minority groups. The territory of the Nyangatom stretches from the Omo River in the East to the Kibish River in the West. While those who live in the West and central parts of the territory rely heavily on livestock production, those in the East depend on agro-pastoralism as they use flood retreat cultivation to produce mainly Sorghum.

The Nyangatom woreda is surrounded by several neighbors both inside and outside Ethiopia, namely, the Turkana (Kenya), Toposa (South Sudan), Surma, Mursi, Kara, Hamer and Dasanach (Ethiopia). Our informants declare that they had maintained peaceful and brotherhood relationships with Toposa, Muguji, and Murle. On the contrary, as stressed by respondents, the Nyangatom had persistent conflictual relation with the Surma to the Northwest, the Mursi to the North, the
Methods
As this study is intended to analyze pastoral conflict dynamics, emerging trends and environment stress in igniting inter-pastoral conflict in the context of Nyangatom, it adopted a qualitative research method and exploratory case study research design. This would help to study and understand natural setting and real dynamics in the analysis of conflict context. To successfully complete the study and to enhance quality and validity, the study used multiple methods of data collection and purposive sampling techniques. The main methods used in this study included: qualitative interviews, focus group discussions and analysis of documents from Nyangatom district offices and Zonal administration. After informing informants about the purpose of the study and securing their consent, a qualitative face-to-face interview, using unstructured guidelines, were carried out with elders, youths, women, district and zonal officials.

These interviews were undertaken by taking into consideration criteria such as age, sex, and predominantly pastoral kebeles in remote Kibish areas, like Lokoriem, Lotemen and Kajamaken, and agro-pastoral kebeles around the Omo River Valley area. Key informants were identified from elders, youth and women on the basis of geographic distribution and their knowledge related to life experience about the changing trends of climatic and environmental factors, the Nyangatom history, inter-ethnic relations and conflicts with neighboring groups. Key informants and Focus Group Discussion participants were selected with the help of experienced field assistants on the basis of their knowledge in relation to the issues concerned. The field assistants were employed in order to facilitate the data collection processes.

As Berreman (1962) described, the background and the social acceptance of field assistant among the study groups enable researchers to win the confidence of the groups, to cross to their back-region information and reduces informants’ attempt to conceal their secrets. To this end, assistants were selected in accordance with their familiarity with the community and their knowledge about the geographic sites of the study. Then, fifteen Nyangatom pastoralists were interviewed in their respective villages found in Lokoriem, Lotemen, Shenkora and Kajamaken kebeles and five district officials were also interviewed at the capital of Kangaton, Nyangatom district. Seven key informant interviews, i.e. four with elders, two with youths and one with women were conducted. All data collection
processes were undertaken in three different phases for different purposes from 10 July to 20 August 2012, January to February 2015 and in September 2018.

To make participants to debate on views and events, scenarios, and even on the current reality Focus Group Discussions (FGDs) were employed in this study. Four FGDs were held in selected conflict-prone villages found in Lokorimi, Lotemen and Terga kebeles while one FGD was conducted in Kangaton. Participants of the FGDs composed of elderly men, women and the youth. Each FGD has eight participants classified based on their sexes.

This study also makes use of secondary sources in order to make the study more comprehensive through looking at diverse scholarly interpretation on the inter-ethnic pastoral conflict dynamics in the Lower Omo Valley in general and the Nyangatom in particular. Regarding data analysis technique, collected data were analyzed using qualitative description, analysis and interpretation. To maintain the reliability, credibility and validity of the study, different strategies were designated such as, in-depth understanding of the study issue, cross-checking the gathered data with another sources and triangulation of the data by using thematic analysis. All ethical procedures, like collecting permission letters, understanding and respecting social values of the study community and getting consents from research participants were undertaken before the actual field works in three phases.

Results and discussion
Inter-pastoral conflicts
As noted earlier, the Nyangatom is surrounded by several pastoral groups including cross-border neighbors. From these neighbors, the Nyangatom had maintained conflictual relation with Turkana, Hamer, Dasanach, Surma and Mursi due to prolonged history of animosity and conflict. Informants uncovered that conflicts occurred intermittently and conflict resolution lasted for some years in the historic past. More recently, however, peace initiatives could not last for long period due to repeated failure and increase in the frequency and intensity of conflicts from time to time. Despite efforts to resolve conflicts, there were frequent conflicts between Nyangatom and Dasanach, as well as Nyangatom and Turkana of Kenya. In this section, attempt has been made to present the historical and current state of the Nyangatom conflicts with Dasanach and Turkana due to their frequency and enduring historic legacy.

The Nyangatom vs. Dasanach conflict
Both the Nyangatom and Dasanach are two longstanding neighbors occupying the Lower Omo Valley in Ethiopia. They were under one administration for a long
time, first as Geleb woreda and later as Kuraz woreda, so named after the mountains near the Ethio-Kenya border. In 2006, the government was forced to split up Kuraz woreda into two Woredas i.e., Dasanach and Nyangatom mainly due to the fact that they were always squabbling (Girke, 2008). Historically, they had amicable peaceful co-existence and interdependency though gradually gave way to animosity and conflicts (Tsega-Ab, 2005). In the late 1970s, the sporadic attacks and counter-attacks were finally led to a major war at Lophitar around Kibish. As noted by informants, the immediate cause behind this war was cattle raiding and murder by the Nyangatom against the Dasanach. In retaliation, the Dasanach launched a serious attack on the Nyangatom and inflicted huge atrocity to extent that many Nyangatomos were displaced and migrated to Toposa of South Sudan by fearing another attack. In this period, the Dasanach got superiority not only over its neighbors but also over the Turkana of Kenya. This was consistent with the fact that during the 1970s and the early 1980s, the Dasanach had an advantage over the Nyangatom, partly because the latter had involved in battles with other neighboring communities, mainly the Kara and Hamer (Sagawa, 2010). Thus, the relations between the two groups were worsened in the 1970s and onwards.

Respondents mentioned that a vicious chain of retaliation had brought about by the Kalem war when the Nyangatom launched an attack on the Dasanach that inflicted heavy loss of life. It was also indicated that retaliation had been conveyed by the Nawoyahafe war when the Dasanach commenced assault on the Nyangatom around Kibish area. Our informants reported that the vicious scenario of conflict and retaliation had continued throughout the 1970s and the 1980s. Informants perceived that this was, partly, because of lack of peace-making efforts until the taking over of the state power by the military Derg regime in Ethiopia. It was believed that the causes for conflict in the 1980s were heroism, dowry, competition over pasture and water points and demand for assets such as livestock-wealth. The nature of conflict was drastically changed after the introduction of modern weapons, such as, AK-47 automatic rifles, rocket launchers and Kalashnikov as a result of Sudan civil war. The results of this study showed that it was the Nyangatom who had first acquired these modern arms through their ethnic kin and allies, the Toposa of South Sudan. The study further showed that the Nyangatom used the civil war in the Sudan to their advantage through Toposa by getting military training and weapons from and serving in the Sudanese People Liberation army (SPLA). The present result is in agreement with the work of Asnake and Fana (2012) who suggested that the Nyangatom obtained opportunities from SPLA, such as easy and cheap access to weapons, bullets and military training.
Consequently, the result showed that the regional power was shifted from the Dasanach to the newly emerged fire-power of the Nyangatom until the early 1990s.

According to our informants, the Nyangatom obtained superiority not only over the Dasanach, but also over other neighbors, such as the Surma, Mursi, Hamer, Kara and Turkana. Scholarly studies (Tornay, 1979; Abbink, 1993; Sagawa, 2010) also confirmed that fire-power gave the Nyangatom a decisive edge over its traditional enemies as they launched disastrous attacks on all their neighboring communities. The proliferations of modern arms have changed the nature, frequency and effects of conflicts in the study area. The Toposa of south Sudan with whom the Nyangatom share common ethnic identity had not only supplied modern arms but also forming alliance with the Nyangatom against its traditional enemies. Informants reported that well-armed and allied groups (i.e., the Nyangatom and Toposa) attacked the Dasanach and destroyed their villages, such as Lotortur, Kalmagneg and Yiramagneg in 1987 and inflicted heavy causalities and raided livestock. They further witnessed that the allied groups launched the most horrific attack at Salain in 1988 on Dasanach that caused huge atrocity of innocent life, destruction of properties and raiding of their cattle during the Akudunigole war with the Turkana of Kenya. The Salain war event was well explained by Sagawa (2010) as follows:

The Nyangatom attacked the village (Salain) before sunset and killed hundreds of Dasanach in just a few hours. In this battle, the Dasanach observed that some Nyangatom continued to shoot at the dead bodies of the Dasanach, even after they ran out of bullets. The Dasanach recall this time as, ‘the Nyangatom got drunk with Kalashnikovs’ (2010, pp. 1-2).

As observed during the fieldwork, infuriating feeling and memory of Salainwar left behind is still obvious in the Dasanach tone and would likely go down to the generation lines. This is true in the words of one Dasanach informant:

We had forgiven the Nyangatom that is why we have peace today but we do not forget their deed. Their intention was to eliminate us from our fathers’ land but God saved us. We have not yet revenged them because we do not want to repeat such bad history and we need peace as our culture allows us (Interview, 30 November, 2012).
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Our informants highlighted that the political chaos of the early 1990s at the national level contributed to the readily available automatic rifles to the pastoral peoples in the study area. They reported that merchants and ex-soldiers brought modern rifles from Arbore, Borana, Somalia and Turkana where the modern arms were highly proliferated in the study area as of the early 1990s. The Dasanach and other neighboring groups were substantially recovered from crisis caused by firepower of the Nyangatom and Toposa. The current result showed that many Dasanach carried modern arms, which were becoming the new symbol of male status and power in that society. Subsequently, Dasanach elders said that they regained strength and self-confidence of the past, which enabled them to defend themselves against the dominant power of the Nyangatom.

The study result indicated that Dasanach and other neighboring groups, like Mursi and Surma, who were equally suffered, launched attack against the Nyangatom following their access to modern arms, which resulted in a fierce chain of retaliations. It was reported that the Dasanach had conducted fanatic attacks on the Nyangatom around Kibish area. For instance, as the results of the study shows, the Dasanach attacked the Nyanagatom at Nakowa in the early 1990s. After the Nakowa war, the Dasanach did not execute large scale and well-organized assaults against the Nyangatom. However, they established the fact that they could fight with the Nyangatom as equals. Our findings further indicate that the proliferation of modern arms and subsequent acquirement by all pastoral groups in the study area had increased the escalation of conflicts. Although no large-scale assaults took place as the case before the 1990s, informants’ observation indicates that their relations remained conflictual and unimproved. As study result indicates, the trends of conflicts were changed from communally initiated to individually oriented conflict, which is highly sustaining cyclical scenarios of conflicts and retaliations. The study reveals that the nature of conflict in the study area was shifted from large-scale armed conflict to individual or small group based incidents like cattle raids or thefts. Thus, the changing nature of inter-group conflict is adversely affecting efforts to improve inter-group relationship that would significantly contribute for realizing long-lasting peace in the study area.

Currently, a single incident is enough to trigger massive pastoral conflicts in the lower Omo Valley as reported by informants. As a result, informants mentioned their fear that peace efforts may be fragile enough to be eroded by a single incident. Overall, the results of the present study reveal that the dichotomization of neighbors as friends and enemies by the Nyangatom has posed a tremendous challenge for peace in the study area. For instance, report from the Nyangatom district police office shows that, in 2011, small groups of Dasanach...
perpetrators entered the Nyangatom territory six times, killed four people and injured sixteen others. In the same year, the Nyangatom perpetrators entered the Dasanach territory many times, killed three people, and injured one other and raided livestock.

The study result revealed that the Nyangatom-Dassanch conflicts were caused by multiple factors, which account for the frequent, unpredictable and intermittent conflicts. The major causes behind these rather persistent conflicts were historic legacy, culture of retaliation, culture of transferring incident into big inter-group conflicts and marginalization of the traditional conflict management system.

**The Nyangatom vs. Turkana conflicts**

Unlike Dasanach, both the Nyangatom and Turkana belong to the Karamojong cluster. They speak a similar language that belongs to the Nilotic language family (Mburu, 2001). Despite belonging to the same ethnic, geographic and socio-economic cluster; as noted by respondents, their inter-group relations were hostile for several decades. Informants stated that they had frequently engaged in cross-border conflicts. Traditionally, both the Nyangatom and Turkana are coherent pastoral groups organized around territorial sections, generation-sets and clans.

The oral history noted that the Nyangatom migrated north-eastwards from Karimoja area, northeast Uganda due to the pressure imposed by Turkana pastoralists. Allegedly, they were migrated together with Toposa. Thus, the Nyangatom were actually a splinter group from Toposa, who, in turn, originated from the Jie ethnic group of Uganda (Tornay, 1979; Mburu, 2001). This historic account suggests the fact that their inter-ethnic relation was characterized by competition and historic rivalry. After migrating from northeast Uganda, the Nyangatom had their home around the Kibish wells and in southwest Ethiopia between River Kibish and River Omo (Mburu, 2000, p.150). As noted by MacCabe (1996), the period from 1500 to 1800 appears to be characterized by frequent splitting and fusing of ethnic groups and shifting alliances among the different groups. The Turkana emerged as a distinct ethnic group sometime during the early to middle decades of the 19th - century (cited in Gebre, 2012b, p. 157).

Their inter-group relation was further deteriorated after the British colonial conquest of the region. In the 1970s, as study result reveals, the sporadic attack and counter-attacks were finally led to a major war between the Nyangatom and Turkana and other neighboring pastoral groups. Initially, the Nyangatom were poorly armed compared to their neighbors and hence they were under frequent attacks as reported by informants. Because of these consecutive attacks, the
Nyangatom might have lost about ten percent of their population in the 1970s (Tornay, 1998). As stated by informants, lack of any protection from the Ethiopian government made the group vulnerable to huge causality. As indicated earlier, the Nyangatom used the civil war in the Sudan to their advantage through Toposa to get firearms. They waged a retaliatory war on Turkana. The study indicates that the Nyangatom-Toposa raiders joined forces and conducted a lightening attack in April 1988 on the Turkana of Lokichoggio across the Kenya-Sudan boundary. In this regard, De Wall (1991, pp. 345-6) has noted that after two days of fighting with the Kenyans, one hundred ninety Turkana lay dead and unspecified numbers were wounded. It was further reported that fifteen members of the Kenyan Police were also killed and some taken hostage by the Nyangatom in another attack in July 1988. Previous studies (Asnake and Fana, 2012; De wall, 1991) have shown the intervention of the Kenyan military forces with implicit approval of the Ethiopian government in response to the above consecutive attacks. Moreover, De Wall (1991) has further mentioned that the Kenyan government responded with an attack using helicopter gunships and paramilitary forces on the Nyangatom area of Kibish. On the other hand, Matsuda (1994) has reported that the Kenyan military forced the Nyangatom out of the Kibish River valley in May 1988, which is the arable belt that supports their agricultural and pastoral economy. It is also the heart of the contested Ilemi triangle, which is currently under Kenyan de facto control (Geber, 2012). Informants mentioned that the attack killed a large number of the Nyangatom community. This is also confirmed by De Wall (1991, pp. 345-6), who has mentioned that about 200 Nyangatom raiders and a minimum of 500 civilians were killed by the Kenyan military forces over the following 18 days of attack at a place called Dio. This horrifying act was locally named as dio incident. At the same time, as noted by resourceful informant, the Nyangatom was also under fierce war and retaliatory attacks from Dasanach, Mursi and Surma. Thus, the results of the present study indicate that ramification of the war was very devastating on the side of the Nyangatom.

Informants believed that the proliferation of modern arms had changed the nature, frequency and effects of pastoral conflicts. For example, as mentioned by our informants, the Nyangatom-Turkana relation has begun to severely deteriorate after 1988 dio incident that compelled the Nyangatom to abandon Kibish area in the West. This suggests that the causal factors driving the longstanding cross-border conflicts are multi-dimensional, which also have serious policy implications on the livelihoods of the community within and across borders. These causal factors have tended to become mutually reinforcing. The study reveals that the key causal factors that contributes to and exacerbates Nyangatom-Turkana cross-border
Emerging trends in conflict dynamics
The study indicates that the emerging trends in conflict dynamics in the study area were linked to major socio-economic issues. Generally, informants perceived that the key emerging trends in conflict dynamics included: (i) commercialization of livestock raiding, and (ii) increment of conflict actors and change in their interests.

Commercialization of livestock raiding
The results of the current study showed that the nature and practice of livestock raiding had been transformed in the study area. The cattle raiding and rustling were transformed in pastoral areas from a cultural practice to an international commercial venture organized by cattle warlords that enable them to market livestock and their products’ (Ngeiywa, 2008, p. 63). Consistently, John Markakis (2004, p. 26) has also noted that, in the past, cattle raiding was a communal venture, organized and sanctioned by community leaders whose goals were to ensure optimal size of the group. However, this customary ‘communal venture’, traditionally carried out with spears and bows, has increasingly replaced by a new form of gang raiding, carried out with modern weapons as a lucrative source of income (2004, p. 26). The livestock thefts and raiding remain the hallmark in the Nyangatom relationship with its neighboring groups (Gebre, 2012b). Informants and existing recent studies (Geber, 2012b; Ngeiywa, 2008; Teshome, 2012) uncovered that political elite’ and business men are allegedly involved in cattle rustling as a means for commercial profit. This is a newly emerging phenomenon in the study area.

The study result showed that the involvement of local political elites had changed the scope of conflict by creating economic incentives that did not previously exist and has exacerbated the brutality associated with cattle raiding. Consistently, Mkutu (2003, p. 45-49) has also noted that local elites allegedly funded raids in order to sell cattle in the black markets to places as far away as South Africa and Saudi Arabia. This has also created links between the illicit trades in stolen cattle and small arms (Leff, 2009). This commercialization of raiding is leading to major changes in economic, social and political structures in the border areas of Karamojong Cluster (Mkutu, 2003). Our respondents confirmed that the local warriors conducting large commercial raids outnumber Ethiopian
border security forces. There is also evidence that many local security providers are in collusion with the profiteers of raids. Indeed, the lack of strong state control and weakening of the traditional authority in the pastoral region has paved the way for what Osamba (2000) calls ‘the emergence of cattle warlords with armed militia’ (cited in Leff, 2009). This is made possible, in part, through the proliferation of small arms. Informants pointed out that with the presence of small arms cattle warlords can too often outmatch and even undermine the security forces. This is clearly described by earlier scholars (Lokiyo, 2014, p. 146; Gebre, 2012b, p. 362), suggesting businessmen’s contribution for quick escape for stolen cattle by providing lorries to transport the stolen livestock faster to markets very far away. It seems that the involvement of non-pastoral conflict actors has thus helped to sustain the cattle raiding conflict in pastoral areas.

**Increment of conflict actors and change in their interests**
Informants’ experience showed that in the 1970s and the 1980s, the Nyangatom conflicts with its neighboring groups (i.e., Dasanach and Turkana) were large scale involving the whole community members. As of the early 1990s, however, they felt that the large scale conflicts were avoided by the groups recognizing the fact that such conflict can cause huge atrocity as they had acquired automatic rifles and their mutual recognition of the balance of power. According to the opinion of informants, the pattern of conflict was changed from large scale to small scale usually initiated by individuals that would trigger group conflicts. More recently, youngsters may be the major actors in triggering group conflicts as they are unwilling to comply with the traditional authority.

It was perceived that the involvement of wide range of actors had further complicated the efforts of conflict resolution, which in turn made the conflict situation extremely unpredictable and dynamic in nature. In addition, the diversifications of local conflict actors are contributing for the escalation and sustainment of the cycle of local conflicts. The results of the current study suggest that the frequency of the conflict acts nowadays are not for the purpose of heroic, cultural pride or glory as they were in the past but for material assets. Besides, it seems that the historic conflicts between the various groups, which were for the benefit of communal interests, had given the way for the interest of youngsters. Overall, informants felt that the diversity of actors involved in the conflict might further complicate the efforts to resolve conflicts and build peace. Such emerging trend could completely change the frequency of conflict and related causalities. The results of study indicate that the dynamic nature of the conflict had further complicated the situation and in turn made most peace accords fragile. This study
also indicates that the timing of conflict is usually unpredictable and it is difficult to extract any early warning conflict indicators.

**Environmental stress and conflict**

There is a direct link between globally changing climatic conditions, natural resources, livelihood insecurity and conflict in Karamojong cluster. Changing patterns of climatic condition and subsequent recurrent droughts has negatively impacted the availability of resources and food security in the region (CEWARN, 2004; USAID, 2002). This is viewed to have resulted in increased incidents of cattle raids, and increased competition over pasture and water resources, and droughts have led to the loss of animals, encouraging raids and counter raids (Mwanikiet al., 2007; Schilling et al., 2012).

The economy of the Nyangatom is mainly based on livestock production. Socially, crop production that depends on the traditional flood retreat cultivation is also given a secondary importance in the eastern part of Nyangatom. However, the environmental factors related to climate variability and resources degradation brought more complicated challenges to their economy. Currently, study results indicate that the pastoral groups are demographically expanding in a fragile environment that frequently gets hit by recurrent drought that further diminishes the carrying capacity of the area. Informants’ experience showed that during the prolonged droughts, pasture and water sources become desiccated and lands turn arid. They stated that this precipitates the need for pastoralists to migrate in search of grazing lands and water. They further believed that it is during these times that pastoralists engage in resource-scarcity induced conflict over herding territory.

Pastoralists explained that when droughts were extended they were forced to leave their villages with livestock. As a result, conflicts became more intensified and frequent in connection with the scarcity of pasture and water resources that in turn escalate competition and conflict over the control of available resources. On the basis of seasonality and climatic pattern, the Nyangatom traditionally divide the year into two major seasons of equal length, month of abundance called *akuporo* and month of dry season called *akamu*. Recently, the meanings attached to these months were being lost due to fluctuating nature of the weather condition. Accordingly, the indigenous knowledge about cattle breeding and flood retreated cultivation is also highly affected (Asnake and Fana, 2012).

According to the views of informants droughts had increased in both frequency and intensity in the study area. In recent times, the Nyangatom had faced the problem of recurrent drought in history (Temesgen, personal communication at the time of data collection). Informants believed that the areas
and number of people affected by droughts and subsequent environmental stress rise significantly in the Nyangatom. Pastoralists reported that they lost significant number of livestock due to recurrent droughts and the impact of environmental degradation linked to the invasion of *Prosopis–Juliflora* around Kibish areas. Accordingly, drought-related emergencies were raised sharply in the study areas. For Nyangatom, the Kibish River has socio-cultural value beyond providing water. Therefore, the drying of the Kibish River has further worsened the situation to the Nyangatom in the Lower Omo Valley. According to pastoralists’ opinion, the invasion of *Prosopis–Juliflora* in their key grazing lands in the river bank of the Kibish River added to the drying off the river itself had caused the worst environmental degradation in the region. As mentioned by informants, *Prosopis–Juliflora* is a thorny woody plant species allegedly planted by the Kenyan government and this thorny bush has been invading and spreading at alarming rate throughout the grazing lands on both sides of the Kibish River. Even worse, this thorny bush also serves as a hiding place for livestock raiders from Turkana and other neighboring groups as reported by pastoralists.

As copying mechanism, mobility is an indispensable element of pastoral livelihood (Yimer, 2012). It is cognizant of this fact that pastoralism is described as a trans-national phenomenon than a national one. Pastoralists’ mode of life knows no political boundaries or geopolitics (Adano, 2012). Contrarily, it seems that an ethnic-based federal form of governance has been contributing in constraining the movement of pastoralists in Ethiopia. This makes inter-pastoral rivalries more commonplace as it doesn’t consider pastoral system as a viable system. By hindering mobility, the ethnic-based federal system has created pressure on the pastoral system. This is because it has failed to consider the mobile livelihood system of the pastoral communities and also threatens their culture, social institution and identity. Moreover, it shows how far the existing government has no adequate legal and policy framework to bring desirable pastoral development and to ensure sustainable pastoral way of life. As copying mechanism, pastoralists reported that they concentrate in resource-rich areas during recurrent droughts that might cause inter-pastoral contestation over diminishing scarce resources. Thus, the recurrent droughts brought escalating levels of pastoral mobility as copying mechanism that led to resource-scarcity induced inter-pastoral and cross-border conflicts.

The study indicates that, despite prolonged hostility, the Nyangatom move into the Omo National Park in Mursi territory during dry seasons. The Omo National Park is preferred by livestock for its salty soil. The study further reveals that they also move frequently into the neighboring Surma territory and cross
border into the territory of Turkana of Kenya in search of pasture and water irrespective of the danger of loss of human lives and livestock due to risk of conflicts with these neighboring groups. The Nyangatom also cross border deep into South-Sudan to their ethnic kin of Toposa. Due to this seasonal mobility, as study results indicate, frequent inter-pastoral conflicts were taking place between the Nyangatom and its neighboring groups. Indeed, the study discloses that, keeping up with other compounding conflict dynamics, there exist a causal link between environmental factors and the Nyangatom conflicts with its neighboring pastoral groups.

**Conclusions**

This study has investigated pastoral conflicts dynamics, emerging trends and environmental stress in the Lower Omo Valley taking the Nyangatom as a case in point. The results of study showed that there was a relationship between environmental stress and inter-pastoral conflicts between the Nyangatom and its neighboring Turkana, Surma and Mursi. The Nyangatom had also been in conflictual relation with the Dasanach for factors largely unrelated with environmental reasons. The conflict dynamics were of multiple natures. As a result, any attempt to resolve conflict needs deeper understanding of conflict dynamics and emerging trends through a comprehensive analysis. Environmental changes escalate and further ignite pastoral conflicts due to competition and control over the shrinking resources and food insecurity. The study showed that the environmental changes had uniquely affected the Nyangatom. This is evidenced by the drying of the Kibish river in the South linked to frequent drought and invasion of grazing lands by *Prosopis–Juliflora* that seriously affected the regional environment and further complicate the situation for Nyangatom.

The study indicates that environmental changes increased pastoralists’ pressure on the scarce and fast-depleting pasture and water resources that certainly escalate resource-based conflicts. In response to environmental changes through mobility as part of the traditional coping mechanism, the Nyangatom used to migrate to the Omo National Park that caused conflict with Mursi in the North. They even used to cross border deep into South-Sudan to their ethnic kin of Toposa and into Kenya that caused frequent cross-border conflicts with Turkana. They also frequently move and occupy grazing lands in Surma territory in search of pasture that caused resource use related conflicts. All these mobility during the prolonged dry seasons were very risky and caused conflicts. These types of conflicts are mainly induced by environmental changes. Apart from these factors, weak government actions and ethnic-based sub-division of administrative units.
that hinder communal use and access to rangeland resources might also cause conflicts in the study area. The weak security status in the border areas; lack of integrative development projects to create socio-economic integration of the conflicting groups over grazing and water resources; lack of significant alternative livelihood strategies to counter the negative effects of environmental changes; absence of institutional mechanisms to enforce peace accords and peace plans were all contributing factors for sustaining the cycle of violence and inter-pastoral conflicts in the Lower Omo Valley of Southern Ethiopia.

Competing interests
The authors declare that they have no competing interests.

Authors' contributions
TTH originated the concept of the study, conducted the field work and data analysis and interpretation processes, and drafted the manuscript. Contributing author, AA, is involved in the final write up and edition of the manuscript.

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