



*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

*No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.*

# DRIVING FACTORS BEHIND UGANDA S RURAL PASTORAL COMMUNITIES SOCIAL-ECONOMIC STATUS; A COMPARISON BETWEEN KARAMOJA REGION AND ANKOLE REGION

Stewart Ategeka

Faculty of Economics and Business, University of Debrecen, Hungary

ategeka.stewart@gmail.com

**Abstract:** *In several nations throughout the world, nomadic pastoralists comprise a wide important group but are quite often considered an ethnic minority. They are estimated to constitute over 200 million people globally, with an economic role that is often neglected despite their unique importance to sustainable development and the ecosystem. They turn deserts and rangelands, where crops cannot grow, into food-producing zones. They are great stewards of the environment despite living in challenging circumstances and struggling with the impacts of climate change, conflicts, and social rejection. This study aimed to analyze the social-economic status of Karamoja, Uganda's largest pastoral region that has consistently stood out as the least developed region in Uganda. The region is naturally endowed with a variety of minerals such as marble, limestone, gold, etc. This has attracted both local and international artisanal and small-scale miners into the region although their contribution to the region's development seems negligible. Three major rural development aspects i.e., social, ecological, and economic dimensions were assessed and compared to the Ankole region, one of Uganda's rural pastoral regions that has over time registered progress in livestock production and regional development. Based on this comparison, similarities and differences were identified and used to build the foundation for the development of a SWOT analysis. The region's major strengths are high adaptability levels to climate shocks and communal land ownership. The greatest challenges to the region are cattle rustling, poor infra-structural development, and extremely dry weather conditions. For sustainable development to be realized in the region, there is a need to enhance security to stop cattle rustling and development of well-focused policy intervention measures strengthening climate change mitigation and coping strategies.*

**Keywords:** *pastoralism, rural development, sustainable development, SWOT analysis, Comparison*  
(JEL code: Q56)

## INTRODUCTION

Karamoja is Uganda's dominant pastoral community positioned in the North-Eastern part of the country. The region has recently attracted national and international attention due to various development challenges that are driven by sociological and ecological factors. Karamoja stands out among Uganda's least developed regions. This is evident due to high levels of income and food poverty i.e., 60.2% and 70% respectively (UBOS, 2018a). The region is made up of four livelihood zones i.e., maize-livestock zone, mixed crop zone, apiary potato zone, and sorghum-livestock zone. With a population rooted and based in rural areas, most people in the region survive on livestock and crop production. Of late, the developing scope of expanded livelihood activities is growing to include diversification into a wide range of economic activities.

Karamoja region comprises of nine administrative districts (Kotido, Kaabong Moroto, Abim, Napak, Nakapiripirit, Amudat, Karenga and Nabilatuk). The population of Karamoja was estimated at about 1.2m people with the greatest percentage of about 70% residing in rural communities (UIA, 2016). The region generally has a hot climate with very minimal rainfall receiving about  $920.1 \pm 118.9$  mm. The temperatures have consistently been raising since 2000, however, the temperature ranges between  $16.8 \pm 0.5^\circ\text{C}$  and  $30.6 \pm 0.4^\circ\text{C}$  with a mean range of  $32.0 \pm 0.7^\circ\text{C}$  and  $30.6 \pm 0.4^\circ\text{C}$ . The terrain is made up of plains raising towards the eastern parts of the region whose terrain is mostly hilly towards the escarpment and boundary line with the Turkana district of Kenya. A big Portion of the region is occupied by Kidepo Valley National Park within the grassland and woodland savannah ecosystems that dominate the region's northern parts. (Egeru et al., 2019).

Despite having a special ministry under the office of the Prime Minister of Uganda (Ministry of Karamoja affairs), the region continues to grapple with poverty which is accelerated by factors such as unfavorable climate, poor infrastructure, poor farming practices, and insecurity which is due to massive cattle rustling (Egeru et al., 2014). Parts of both Karamoja and Ankole are located in the rangelands of Uganda's cattle corridor. Rangelands are characterized by highly heterogeneous and widely disintegrated resources, whose fluctuation is attached to seasonal changes, time, and inconsistent climatic circumstances. The individuals who live in such regions should fight with various factors that manage range productivity, among which precipitation designs assume a significant part. Downpours might fall plentifully in one area for many years, yet flop completely and without advance notice in some given years. The disequilibrium model of rangeland resource usage and its significance on the movement of livestock to adapt to risk is more fit along the cattle corridor in the north-eastern part of Uganda (portions of Karamoja), situated in a dryer, uni-modular precipitation zone, compared to the Ankole cattle corridor in south-western Uganda comprised of higher, bi-modular precipitation (Rugadya, 2006).

The nature of the environment in Karamoja has a wider contribution to the Karamojong culture and social life. To get by in this capricious territory, the Karamojong people embraced a nomadic pastoral way of life. They keep livestock and obtain a critical piece of their nourishing needs from the blood drawn from the animals, milk, and meat (Jabs, 2007). It is upon this background that this study sought to answer specific questions i.e., i). What is the connection between Karamoja's environment and the social way of life of the Karamojong people? ii). In what ways do ecological and economic factors contribute to Karamoja's socio-economic status? iii). What lessons can the Karamojong people learn from the Ankole people? The overall objective was to assess the extent to which ecological, and economic factors contribute to Karamoja's socio-economic status in comparison to the Ankole region.

## MATERIALS AND METHODS

This study was focused on rural pastoral settlements. The changing patterns and ceasage in unique characteristics of rural areas create a highly problematic phenomenon in the definition of rural areas. Furthermore, it is noted that there is no single definition of „rural”, making it highly ambiguous (Holland et al., 2003). On the other hand, it is possible to recognize rural areas based on common features such as; areas where human settlements and infrastructure make up only smaller segments of the landscape, with the greater parts being prevailed by fields and pastures or woods and forests, mountains, and water. In addition, the majority of the people spend most of their working time in farming activities, there is plenty and low-priced land, high costs of transaction due to extended distances and less developed infrastructure, and the likelihood of elite capture or urban bias is increased by higher costs of transactions associated with geographical conditions (ASHLEY & MAXWELL, 2002). For the purpose of this study, rangeland settlements within the Uganda cat-

tle corridor (Kiggundu et al., 2019; Nakalembe et al., 2017; Nalapa et al., 2017; Roschinsky et al., 2012a; Sempira et al., 2017) were part of the key features that made Karamoja (Fig. 1) and Ankole (Fig. 2) relevant rural areas with a common characteristic of pastoralism providing a unique study area.

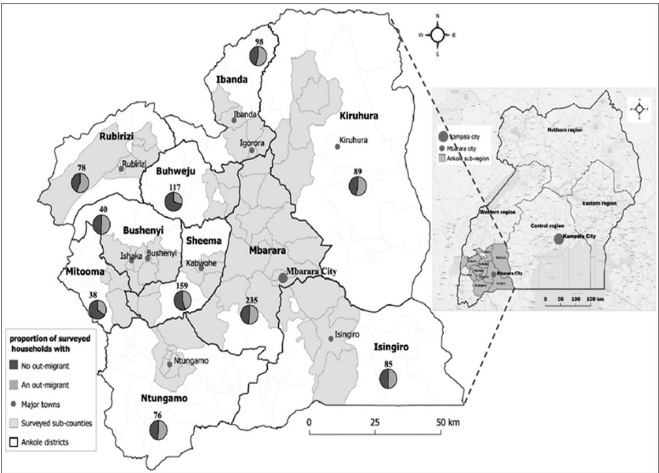
The research design was based on content analysis. This involves studying documented human communications, including categories such as books, letters, web pages, magazines, poems, paintings, newspapers, songs, and speeches (Babbie, 2020). Content analysis is an approach that enables objective, systematic and quantitative explanation of the manifest content of the communication. The method is used to categorize and code (and subsequently analyze) both the manifest and latent content of the data. Manifest content refers to those components that are visible in the data and can be counted. Latent content refers to the meaning that may lie behind the manifest content (Saunders et al., 2019). Qualitative comparative analysis (QCA), the name given by Charles Ragin, was utilized to break down the causal attributes of various circumstances by recording the various designs of conditions related to each instance of a noticed result. These were then exposed to a minimization methodology that distinguishes the easiest arrangement of conditions that can represent the noticed results, as well as their nonappearance (Ragin, 1998). Based on the results, the two regions can be distinguished using identical and non-identical aspects between the Karamoja region and the Ankole region drawn from wider dimensions to a specific focus area. To compare the Karamoja region and Ankole region, the analysis of results was broken into Social, ecological, and economical dimensions. The concept of sustainable development and the proposition for its execution is based on the unity of three major components: social, environmental, and economic. For social and economic interests to be implemented, they should be a subsidiary of the ecological function (Kabitova et al., 2016). In this context, rural communities were a major intentional focus for creating a clear overview of the social life and rural development aspects in both regions based on a SWOT grid. The SWOT matrix has been used to monitor and analyze sustainable development practices in various fields to address local, regional, national, and international issues (Kaymaz et al., 2022). Despite having a wide range of applications, the SWOT analysis has various limitations. It only has the ability to classify the factors into its four groups but is unable to rank and prioritize (Shakoor Shahabi et al., 2018). The independent use of SWOT analysis can not produce a quantified analysis of values and is therefore unreliable in prioritizing alternatives during decision-making (Yüksel & Dagdeviren, 2007). These limitations can be overcome by the integration of SWOT analysis with Multi-Criteria Decision Making Methods (MCDM) approaches (Chang & Huang, 2006). SWOT analysis has been used in the study of agricultural environments (Suh, 2014). Nomadic pastoralism in Karamoja is not only a social way of life but also a farming activity that can be studied with a SWOT analysis. The terms strength and weaknesses allude to interior aspects that measure the capacities of an entity being surveyed while opportunities and threats allude to external elements that influence the manageability of the entity. Accordingly, the strength and

weaknesses, as inside as-pects for improved social life and rural development, opportunities and threats are viewed as outer aspects beyond the control of Karamajongs (Sergaki et al., 2015). In this study, SWOT analysis was used due to the availability of qualitative evidence from the reviews concerning the four aspects. This study is not highly conclusive but can be a reliable starting point and guiding tool for further studies on Karamoja region through the integration of MCDM.

Figure 1: Location of Karamoja region



Figure 2: Location of Ankole region



Source: (Tumwesigye et al., 2021)

RESULTS AND DISCUSSION

Ecological

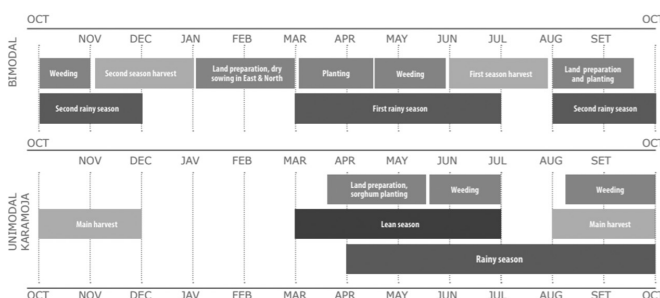
From an ecological perspective, Ka-ramoja's climate is unique from all other regions in Uganda which have a bi-modal rainfall pattern with 2 distinct cropping se-asons (Fig. 3). Karamoja has a Uni-modal rainfall pattern with a rainfall season typi-cally commencing in March and ending in Oc-tober and is accompanied by a lengthy, frequently acute dry season and as a result, a single growing season exists. The annual mean rainfall ranges between 300 mm in the pastoral regions to 1200 mm in the western areas of Abim and Na-kapiripirit. Mean annu-al temperatures range from 16°C in the highlands to 24°C in the rest of the region. In a report by (USAID, 2017), it was revealed that the recent droughts in the region had destroyed 50 – 100% of crop yields for af-fected households. The region's climate di-rectly impacts the availability of water and feed for livestock. Such a climate limits the proper growth of pastures leading to in-adequate feed for livestock. Soils are mainly sandy and of low ferti-lity. These pas-turelands have been used beyond capacity lead-ing to overgrazing. The inadequacy of pasture forces nomadic pastoralists to ma-neuver circumstances by moving during the prolonged dry spell (September to April), resulting in com-petition for scarce resources and thus continuous conflict. The Karamo-jong keep cattle of a similar type (zebu). The Zebu cattle are well adapted to harsh clima-tic conditions due to their genetic makeup with upward-pointing humps, average body size, and weight, heat resistance, blunt snouts, some tolerance to cold, and well-developed dewlap which is very prominent in bulls (Rugadya, 2006).

The Vegetation dynamics in the Ka-ramoja region can be viewed as the major ecological connection between the Ka-ramo-jong and the Environment. As a tradition, the Karamojong moved their animals in a transhumant way to cope with gra-zing lands heterogeneity. Notwithstanding, after the aggregation of firearms in 1911 and assua-gement by the colonial govern-ment from 1921, movement in and out of Karamoja became restricted. These limitations hin-dered the Karamojong's abili-ty to freely graze their animals in the traditional pas-turelands (Anthony et al., 2020; Shmelev & Filipová, 2017). Following the disarmament operation in 2007, a complete prohibition on animals from Karamoja leaving the sub-area was enforced. This implied that the pastoral families had to get along with their livestock inside the sub-region which was likewise shared with the transhumant Turkana (no-mads from Kenya) who move to Karamoja during the dry season to graze their animals. Vegetation dynamics govern resource usage, administration, and power relations in the sub-region. On several occasions, violence and conflict over water resources and gra-zing lands have been registered due to com-petition for resources (Antho-ny et al., 2020). On the contrary, The Bahima people of An-kole Sub-region keep the Ankole long-horned cattle. They have also embraced the application of modern farming technologies and crossbred the Ankole long-horned cattle with Holstein-Friesian cattle to improve milk productivity. Ankole region receives a bimodal rainfall pattern with a peak in April to May and Sep-



tember to November followed by two dry seasons between June to August and December to February. In a similar manner, pastoralists in Ankole face a scarcity of pastures during the dry seasons despite having a bi-modal rainfall pattern thereby making vegetation dynamics a pivotal issue in the social life of the region (Roschinsky et al., 2012b).

**Figure 3: Karamoja's seasonal calendar, a typical year**



Source: (WFP, 2015)

### Economical

From an economic dimension, farming is the major economic activity in the Karamoja region. The region has the highest percentage of people (10%) involved in animal rearing as the main economic activity in Uganda (UBOS, 2018b). This justifies the importance of pastoralism as the main source of livelihood in the region. The economic progress in the Karamoja region has greatly been undermined by insecurity in the region. Disputes in Karamoja ditch various Karamojong clans and sections into huge conflicts against each other. The conflicts exhibit themselves in cattle raids between counties (Odhiambo, 1992). The region also suffers from cross border cattle raids emerging from the Turkana and Pokots of Kenya (IGAD, 2017). Road network is seen to be a critical component in the arrangement of actual physical accessibility of any region. For as long as physical access is limited, it remains a great obstacle for rural communities to obtain health, education, and other major social services. Besides, the capacity to make use of any surplus harvest and economic opportunities such as employment within and outside is drastically restrained (Donnges et al., 2007). Residents in most communities (94%) evaluated the nature of local area roads as poor compared to Ankole where only 60.9% rated roads as poor (UBOS, 2018b). This creates more obstacles to the flow of economic activities in the region hence the continuous lag in growth and development. The region has various minerals such as limestone, marble, and gold, which has led tens of thousands of Ugandans to throng to mostly unlicensed, artisanal mining sites to hunt for a living. In the recent past, there has been a great effort by the Ugandan government to promote private investment in Karamoja's mining sector as a way to revitalize development and further enhance security in a district that has languished over many years from conflict insecurity and under-development (Saferworld, 2017). All efforts to stimulate development have not yielded positive results since poverty is highest in the sub-region of Karamoja (60.2%) compared to all other regions of Uganda, and Ankole which is at 6.8% (UBOS, 2018b).

### Sociological

From a sociological point of view, Karamoja's population is about 1.2m people. The trend of migration is inclined to Rural - Rural migration (50.1%) with less Rural-Urban migration (16.2%). In comparison with the Ankole region, Rural-Rural migration is slightly lower (45.3%) and a higher rate of Rural-Urban migration (20%) (UBOS, 2018b). The trend of migration in Karamoja can be explained by the continuous nomadism where herdsmen move from one place to another looking for grazing fields and water for their animals. The region has the lowest level of education in Uganda with 51% of the population between the age of 6-24 recorded to have never attended school and only 37% was currently attending school. 59.1% of the population aged 15 and above reported having never had formal education. The education level is better in the Ankole region with 78% of the population aged 6-24 currently attending school and only 20% reported to have never attended school. Only 14.6 of the population aged 15 and above reported to have never had formal education (UBOS, 2018b). The education level in Karamoja is directly related to the continuous Rural-Rural migration and way of life where the youths spend most time herding rather than going to school. Karamoja also has a great section of the population with limited access to healthcare services with 17.2% of the population having to move a distance of over 5 kilometers to access first treatment as opposed to Ankole where this applied to only 15.2%. Rural communities in Karamoja struggle with access to food as the food available for human consumption stands at 1,986 kilocalories per person per day compared to Ankole where the average food consumption is 2,463 kilocalories per person per day. In general, Karamoja has the highest food poverty rate at 70% compared to Ankole at only 14%. Furthermore, it was also observed that settlements in Karamoja are mainly made up of semi-permanent structures that are grass thatched (89%), whereas, in Ankole, the establishment of permanent structures has been appreciated with 96.3% of the households using iron sheets for roofing (UBOS, 2018b).

The pastoral culture of the Karamojong people has a strong connection and influence on the sexual and reproductive health of the community. Regularly, cattle are viewed as a fundamental prerequisite for the family, and its growth through marriage (Muheresa, 2010). Females seek to be officially married with cows as bride price as this grants them acknowledgment to be part of the spouse's family, clan, and faction (Stites et al., 2007). This need can impact juvenile young ladies and adolescents to observe and spot admirers who are well off, in order to have a complete marriage status. Further, this community is tolerant and non-restrictive; young ladies can engage in sexual relations with men who mean to wed them. Regularly, this is unprotected sex. This is especially so as a direct result of the cultural norm of bride capture where a man engages in sexual relations with the young lady to show his aim of marriage. Nonetheless, this norm might bring about early pregnancy and contracting STIs through unprotected sex by both females and males (Achen et al., 2021). Most families in Karamoja are polygamous in nature. This is because polygamy is culturally

accepted in the community. On the other hand, family life in the Ankole re-gion is somewhat different from that in the Karamoja region. Karamoja region was reported to have more polygamy families with at least 36.3% and 21.9% of married ladies revealing that they had one and more than two co-wives respectively whereas in Ankole figures stood at 12.8% and 1.8% for one and more than one co-wife respectively (Uganda Bureau of Statistcs (UBOS) and ICF, 2017).

SWOT analysis

From the SWOT analysis results in table 1, Karamoja’s most significant streng-ths lie in the strategic location at the border, well-adapted breeds of cattle, the communal land tenure system, and the bonding social-cultural traditions. The most outstanding weaknesses include; cultural rigidity, internal cattle rustling, a location that is far away from better markets, poor infrastructural development, and the Uni-modal rain pattern that hinders agricultural production.

The major threats to the region are the negative impacts of climate change and external cattle rustling from nomadic pastoralists (Pokot and Turkana) of Kenya.

Based on the Ecological, social, and SWOT analysis, it is evident that Karamoja faces several development challenges, ke-eping the region in extreme poverty for de-cades. On the other hand, Ankole faces somewhat similar challenges but has suc-cessfully broken the locks of poverty and made significant strides towards rural deve-lopment. Given the fact that both Karamoja and Ankole are pastoral regions, a compari-son in terms of differences and similarities is critical if lessons are to be learned from An-kole’s progress.

Table 2 summarizes the results with a key similarity of both regions having more population in the rural areas with less Rural-Urban migration but more mobility within the rural areas in form of Rural-Rural migration.

Table 1: SWOT Analysis of Karamoja Region

	Strengths	Weaknesses
Internal Factors	<ul style="list-style-type: none"><li>The traditional social-cultural life is more binding offering a possibility for economic collaborations in form of SACCOS and Cooperatives.</li><li>Based on the communal land tenure system in the region (Rugadya, 2020), there is limited land fragmentation which can be capitalized on to enhance intensive farming.</li><li>Karamoja is strategically located at the border with better access to both inputs and markets from the neighboring countries of South Sudan and Kenya.</li></ul>	<ul style="list-style-type: none"><li>Cultural rigidity has hampered the development of the livestock sector due to continuous pastoralism and keeping of indigen-ous less productive cattle breeds.</li><li>Poor accessibility; poor rood network, makes access to better markets in Kampala and other districts difficult.</li><li>The Uni-modal rain pattern in the region poses great challenges to crop and pasture production hence the increased rate of pastoralism.</li></ul>

	<ul style="list-style-type: none"><li>The Zebu cattle mainly Kept in Karamoja are well adapted to harsh climatic conditions with high temperatures. This has enabled the continu-ity of pastoralism in the region amidst climate change challenges.</li><li>Wide Mineral resource base.</li></ul>	<ul style="list-style-type: none"><li>Internal Cattle Rustling: Karamajongs continue to raid cattle among them-selves causing insecurity in the region and hinder-ing the development of livestock production in the region.</li><li>Poor infrastructural development in the region hinders economic activity.</li></ul>
	Opportunities	Threats
External Factors	<ul style="list-style-type: none"><li>Under proper organi-zation, farmers in the regions have a better chance to compete for government subsidies compared to any other re-gion in the country. This is because less pastoral regions have been priori-tized under the Regional Pastoral Livelihoods Re-silience Project (RPLRP) (MAAIF, 2014).</li></ul>	<ul style="list-style-type: none"><li>External Cattle Rustling: Following a disarmament project in Karamoja by the government of Uganda, The Pokots from neighboring Kenya easily attack the defenseless herdsmen stealing all their cattle.</li><li>Karamja’s location along the border with Kenya and South Sudan renders the region prone to conflict spillovers from both regions’ likely internal conflicts</li></ul>

Source: Own editing

Table 2: Similarities and differences between Karamoja and Ankole Rural regions

Differences	Similarities
<ul style="list-style-type: none"><li>The levels of poverty and extreme poverty faced by Kara-moja are extremely high; unlike Ankole where poverty levels have progressively dropped over the years.</li><li>In Karamoja, there is limited access to social services such as schools, hospitals, and roads as opposed to Ankole where access is better. These are not only vital for the social wellbeing of the people but also the acceleration of economic activities in the area.</li><li>Karamoja has acute food inse-curity; unlike Ankole where the majority of the population can easily access enough food daily.</li><li>Unlike Ankole which has progressively had stable security, the Karamoja region has had a lot of insecurity mainly caused by cattle rustling both from within the region and by external nomads from Kenya (Kugonza et al., 2012; MAAIF, 2014; När-man, 2003).</li></ul>	<ul style="list-style-type: none"><li>Both Ankole and Karamoja rural areas depend on agriculture as the main economic activity with livestock production dominating.</li><li>Rural-rural migration is more common in both regions com-pared to Rural-Urban Migration.</li><li>There is a great effort by the government of Uganda to pro-mote sedentarization policies for better economic productivity and minimization of environmental damage to the environment in both regions.</li><li>Both regions suffer from inva-sion by crop and livestock pests and diseases, which greatly reduce the production and profit-ability of the agricultural sector in the rural areas.</li><li>In both regions, cattle rearing is not only an economic activity but also considered part of their heritage, with one’s wealth and social status determined by the number of cattle owned.</li></ul>

<ul style="list-style-type: none"><li>• The impacts of climate change have negatively affected Karamoja's population which is profoundly reliant upon means subsistence farming, that is sensitive to changes in environmental conditions, making farming a risky survival mechanism rather than Ankole where climate change impacts have not been so tremendous.</li></ul>	<ul style="list-style-type: none"><li>• Both regions are located in the Uganda cattle corridor.</li></ul>
---	---

Source: Own editing

RECOMMENDATIONS AND CONCLUSIONS

Karamoja is a semi-arid area with numerous climatic challenges but also has a range of minerals that can boost the economy if put to the right use. To achieve development in the area, there is a need for a collective effort from the government, civil society, and the community to improve the road network, education, health care, Agricultural markets, and other social amenities vital in propelling economic activities.

The SWOT analysis indicates that there are several strengths as well as opportunities that can be capitalized on to improve rural development. Unfortunately, the social and economic indicators present several challenges to the way of life and economic development of the region.

From the comparison between Karamoja and Ankole pastoral regions, both have a long history of pastoralism. However, the Ankole region has progressively adopted sedentarization as opposed to Karamoja where most communities still practice nomadic pastoralism.

The information analyzed also reveals higher poverty and food insecurity levels in Karamoja as opposed to Ankole. These are attributed to the dry climatic conditions in the area that do not favor agricultural production. Climate change mitigation and coping strategies need to be undertaken to improve agricultural productivity in the area. Measures that can be undertaken include; the planting of trees, climate-smart agriculture, and the use of irrigation.

The ministry of Karamoja affairs should be given more funds to carry out intensive research to develop specific policies and projects with practical solutions to rural development challenges in Karamoja.

REFERENCES

Achen, S., Atekyereza, P., & Rwabukwali, C. B. (2021). *The role of culture in influencing sexual and reproductive health of pastoral adolescent girls in Karamoja sub-region in Uganda. Pastoralism : Research, Policy and Practice*, 11(1), 1-11. 10.1186/s13570-020-00188-9

Anthony, E., John, P., Magaya, Derick, A., Kuule, Aggrey, S., Anthony, G., Bernard, B., & Jjumba, J., Namaalwa. (2020). *Savannah Phenological Dynamics Reveal Spatio-Temporal Landscape Heterogeneity in Karamoja Sub-region, Uganda. Frontiers in Sustainable Food Systems*, 410.3389/fsufs.2020.541170

ASHLEY, C., & MAXWELL, S. (2002). *RETHINKING RURAL DEVELOPMENT. Forests, Trees and Livelihoods*, 12(3), 155-161. 10.1080/14728028.2002.9752420

Babbie, E. R. (2020). *The Practice of Social Research*. Cengage.

Chang, H., & Huang, W. (2006). *Application of a quantification SWOT analytical method. Mathematical and Computer Modelling*, 43(1), 158-169. <https://doi.org/10.1016/j.mcm.2005.08.016>

Donnges, C., Edmonds, G., & Johannessen, B. (2007). *Rural Road Maintenance - Sustaining the Benefits of Improved Access. ()*.Bangkok: International Labour Office.

Egeru, A., Barasa, B., Nampijja, J., Siya, A., Makooma, M. T., & Majaliwa, M. G. (2019). *Past, Present and Future Climate Trends Under Varied Representative Concentration Pathways for a Sub-Humid Region in Uganda*10.3390/cli7030035

Egeru, A., Okia, C., & De Leeuw, J. (2014). *Trees and livelihoods in Karamoja, Uganda. Evidence on Demand*, UK.DOI, 10

Holland, J., Burian, M., & Dixey, L. (2003). *PPT Working Paper No. 12 Tourism in Poor Rural Areas Diversifying the product and expanding the benefits in rural Uganda and the Czech Republic*

IGAD. (2017). *Social and Economic costs of cattle rustling in Uganda*. Retrieved on April 1, 2022, from: <https://icpald.org/wp-content/uploads/2019/04/UGANDA-CATTLE-RUSTLING-FINAL.pdf>

Jabs, L. (2007). *Where Two Elephants Meet, the Grass Suffers: A Case Study of Intractable Conflict in Karamoja, Uganda: PROD. The American Behavioral Scientist*, 50(11), 1498-1519. <http://dx.doi.org/10.1177/0002764207302466>

Kabitova, E. V., Ashirova, S. A., Nuriyahmetova, S. M., Fathutdinova, O. A., & Ashirov, A. N. (2016). *DYSFUNCTION AS AN OBSTACLE IN ACHIEVING SUSTAINABLE SOCIAL ECOLOGICAL ECONOMIC DEVELOPMENT OF THE REGION (EVIDENCE FROM THE VOLGA FEDERAL DISTRICT). Journal of Internet Banking and Commerce*, 21(S6), 1-16. <https://www.proquest.com/scholarly-journals/dysfunction-as-obstacle-achieving-sustainable/docview/1855296465/seq-2?accountid=15756> [https://FX9ZM5KU7M.search.serialssolutions.com?ctx\\_ver=Z39.88-2004&ctx\\_enc=info:ofi/enc:UTF-8&rft\\_id=info:sid/ProQ%253Aabiglobal&rft\\_val\\_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.jtitle=Journal+of+Internet+Banking+and+Commerce&rft.atitle=DYSFUNCTION+AS+AN+OBSTACLE+IN+ACHIEVING+SUSTAINABLE+SOCIAL+ECOLOGICAL+ECONOMIC+DEVELOPMENT+OF+THE+REGION+%2528EVIDENCE+FROM+THE+VOLGA+FEDERAL+DISTRICT%2529&rft.au=Kabitova%252C+Evgeniya+Vladimirovna%253B+Ashirova%252C+Svetlana+Anatolyevna%253B+Nuriyahmetova%252C+Svetlana+Mazgutovna%253B+Fathutdinova%252C+Olga+Aleksandrovna%253B+Ashirov%252C+Artem+Nailevich&rft.aulast=Kabitova&rft.aufirst=Evgeniya&rft.date=2016-12-01&rft.volume=21&rft.issue=S6&rft.spage=1&rft.isbn=&rft.btitle=&rft.title=Journal+of+Internet+Banking+and+Commerce&rft.isn=12045357&rft\\_id=info:doi/](https://FX9ZM5KU7M.search.serialssolutions.com?ctx_ver=Z39.88-2004&ctx_enc=info:ofi/enc:UTF-8&rft_id=info:sid/ProQ%253Aabiglobal&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.jtitle=Journal+of+Internet+Banking+and+Commerce&rft.atitle=DYSFUNCTION+AS+AN+OBSTACLE+IN+ACHIEVING+SUSTAINABLE+SOCIAL+ECOLOGICAL+ECONOMIC+DEVELOPMENT+OF+THE+REGION+%2528EVIDENCE+FROM+THE+VOLGA+FEDERAL+DISTRICT%2529&rft.au=Kabitova%252C+Evgeniya+Vladimirovna%253B+Ashirova%252C+Svetlana+Anatolyevna%253B+Nuriyahmetova%252C+Svetlana+Mazgutovna%253B+Fathutdinova%252C+Olga+Aleksandrovna%253B+Ashirov%252C+Artem+Nailevich&rft.aulast=Kabitova&rft.aufirst=Evgeniya&rft.date=2016-12-01&rft.volume=21&rft.issue=S6&rft.spage=1&rft.isbn=&rft.btitle=&rft.title=Journal+of+Internet+Banking+and+Commerce&rft.isn=12045357&rft_id=info:doi/)



- Kaymaz, Ç K., Birinci, S., & Kızılkın, Y. (2022). Sustainable development goals assessment of Erzurum province with SWOT-AHP analysis. *Environment, Development and Sustainability*, 24(3), 2986-3012. 10.1007/s10668-021-01584-w
- Kiggundu, N., Ddungu, S. P., Wanyama, J., Cherotich, S., Mpairwe, D., Zziwa, E., Mutebi, F., & Falcucci, A. (2019). Greenhouse gas emissions from Uganda's cattle corridor farming systems. *Agricultural Systems*, 176, 102649. <https://doi.org/10.1016/j.agsy.2019.102649>
- Kugonza, D. R., Nabasirye, M., Hanotte, O., Mpairwe, D., & Okoyo, A. M. (2012). Pastoralists' indigenous selection criteria and other breeding practices of the long-horned Ankole cattle in Uganda. *Tropical Animal Health and Production*, 44(3), 557-565. 10.1007/s11250-011-9935-9
- MAAIF. (2014). *The Regional Pastoral Livelihoods Resilience Project (RPLRP)*. (). London, United Kingdom London, London: Al-bawaba (London) Ltd. Retrieved from ProQuest One Academic <https://www.proquest.com/trade-journals/regional-pastoral-livelihoods-resilience/docview/1562033926/se-2?accountid=15756> [https://FX9ZM5KU7M.search.serialssolutions.com?ctx\\_ver=Z39.88-2004&ctx\\_enc=info:ofi/enc:UTF-8&rft\\_id=info:sid/ProQ%253Aabidateline&rft\\_val\\_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.jtitle=MENA+Report&rft.atitle=Regional+Pastoral+Livelihoods+Resilience&rft.au=&rft.aualast=&rft.aufirst=&rft.date=2014-09-15&rft.volume=&rft.issue=&rft.spage=&rft.isbn=&rft.btitle=&rft.title=MENA+Report&rft.issn=&rft\\_id=info:doi/](https://FX9ZM5KU7M.search.serialssolutions.com?ctx_ver=Z39.88-2004&ctx_enc=info:ofi/enc:UTF-8&rft_id=info:sid/ProQ%253Aabidateline&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.jtitle=MENA+Report&rft.atitle=Regional+Pastoral+Livelihoods+Resilience&rft.au=&rft.aualast=&rft.aufirst=&rft.date=2014-09-15&rft.volume=&rft.issue=&rft.spage=&rft.isbn=&rft.btitle=&rft.title=MENA+Report&rft.issn=&rft_id=info:doi/)
- Muhereza, F. E. (2010). *Drivers of Conflict in Karamoja: An Analysis of Factors Fueling the Continuing Conflict*.
- Nakalembe, C., Dempewolf, J., & Justice, C. (2017). Agricultural land use change in Karamoja Region, Uganda. *Land use Policy*, 62, 2-12. <https://doi.org/10.1016/j.landusepol.2016.11.029>
- Nalapa, D. P., Muwonge, A., Kankya, C., & Olea-Popelka, F. (2017). Prevalence of tuberculous lesion in cattle slaughtered in Mubende district, Uganda. *BMC Veterinary Research*, 13(1), 73. 10.1186/s12917-017-0991-x
- Närman, A. (2003). *Karamoja: Is Peace Possible? Review of African Political Economy*, 30(95), 129-133. <http://www.jstor.org/stable/4006745>
- Odhiambo, T. R. (1992). *African Search for Solutions. Human Impact on the Environment: Ancient Roots, Current Challenges* (1st ed., pp. 201-206). Routledge. 10.4324/9780429037757-13
- Ragin, C. C. (1998). *The Logic of Qualitative Comparative Analysis. International Review of Social History*, 43(S6), 105-124. 10.1017/S0020859000115111
- Roschinsky, R., Mulindwa, H., Galukande, E., Wurzing, M., Mpairwe, D., Okeyo, A. M., & Sölkner, J. (2012a). Pasture use and management strategies in the Ankole pastoral system in Uganda. *Grass and Forage Science*, 67(2), 199-209. 10.1111/j.1365-2494.2011.00834.x
- Roschinsky, R., Mulindwa, H., Galukande, E., Wurzing, M., Mpairwe, D., Okeyo, A. M., & Sölkner, J. (2012b). Pasture use and management strategies in the Ankole pastoral system in Uganda. *Grass and Forage Science*, 67(2), 199-209. 10.1111/j.1365-2494.2011.00834.x
- Rugadya, M. A. (2006). *Pastoralism as a Conservation Strategy, Uganda County Paper*. (). Kampala: International Union for Conservation of Nature (IUCN). [https://www.iucn.org/sites/dev/files/import/downloads/uganda\\_country\\_study.pdf](https://www.iucn.org/sites/dev/files/import/downloads/uganda_country_study.pdf)
- Rugadya, M. A. (2020). Land tenure as a cause of tensions and driver of conflict among mining communities in Karamoja, Uganda: Is secure property rights a solution? *Land use Policy*, 94, 104495. <https://doi.org/10.1016/j.landusepol.2020.104495>
- Saferworld. (2017). *Uganda's mining sector key considerations for conflict sensitive investment in Karamoja*. Retrieved on April 1, 2022, from: <https://www.saferworld.org.uk/downloads/ugandas-mining-sector---karamoja-final.pdf>
- Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (Eighth edition ed.). Pearson.
- Sempiira, J. E., Katimbo, A., Mugisa, D. J., Kisaalita, W. S., & Makerere University. (2017). Ghee-making in the cattle corridor of Uganda. *African Journal of Food, Agriculture, Nutrition, and Development : AJFAND*, 17(1), 11771-11786. 10.18697/ajfand.77.16000
- Sergaki, P., Partalidou, M., & Iakovidou, O. (2015). WOMEN'S AGRICULTURAL CO-OPERATIVES IN GREECE: A COMPREHENSIVE REVIEW AND SWOT ANALYSIS. *Journal of Developmental Entrepreneurship*, 20(1), 1.
- Shakoor Shahabi, R., Basiri, M. H., & Kahag, M. R. (2018). Ranking of productivity improvement strategies in Iran mineral sector based on integrated SWOT-FAHP-FTOPSIS analysis. *Arabian Journal of Geosciences*, 11(3), 1-15. 10.1007/s12517-018-3402-0
- Shmelev, S., & Filipová, Z. (2017). Changes in pastoralist commons management and their implications in Karamoja (Uganda). *Journal of Political Ecology*, 24(1), 881-900. 10.2458/v24i1.20972
- Stites, E., Akabwai, D., Mazurana, D., & Ateyo, P. (2007). *Angering Akujū: survival and suffering in Karamoja. A Report on Livelihoods and Human Security in the Karamoja Region of Uganda*,
- Suh, J. (2014). Theory and reality of integrated rice–duck farming in Asian developing countries: A systematic review and SWOT analysis. *Agricultural Systems*, 125, 74-81. 10.1016/j.agsy.2013.11.003
- Tumwesigye, S., Hemerijckx, L., Opio, A., Poesen, J., Vanmaercke, M., Twongyirwe, R., & Van Rompaey, A. (2021). Who and Why? Understanding Rural Out-Migration in Uganda. *Geographies*, 1(2), 104-123. <https://doi.org/10.3390/geographies1020007>
- UBOS. (2018a). *Uganda Bureau of Statistics (UBOS), 2018. Uganda National Household Survey 2016/2017*. Kampala, Uganda; UBOS. Retrieved on March 18, 2022, from [https://www.ubos.org/wp-content/uploads/publications/03\\_20182016\\_UNHS\\_FINAL\\_REPORT.pdf](https://www.ubos.org/wp-content/uploads/publications/03_20182016_UNHS_FINAL_REPORT.pdf). (). Uganda Bureau of Statistics. [https://www.ubos.org/wp-content/uploads/publications/03\\_20182016\\_UNHS\\_FINAL\\_REPORT.pdf](https://www.ubos.org/wp-content/uploads/publications/03_20182016_UNHS_FINAL_REPORT.pdf)
- UBOS. (2018b). *Uganda National Household Survey 2016/2017*. Retrieved on April 1, 2022, from: [https://www.ubos.org/wp-content/uploads/publications/03\\_20182016\\_UNHS\\_FINAL\\_REPORT.pdf](https://www.ubos.org/wp-content/uploads/publications/03_20182016_UNHS_FINAL_REPORT.pdf). (). Kampala: Uganda Bureau of Statistics. [https://www.ubos.org/wp-content/uploads/publications/03\\_20182016\\_UNHS\\_FINAL\\_REPORT.pdf](https://www.ubos.org/wp-content/uploads/publications/03_20182016_UNHS_FINAL_REPORT.pdf)



Uganda Bureau of Statistics (UBOS) and ICF. (2017). *Uganda demographic and health survey 2016: key indicators report*. Kampala, Uganda,

UIA. (2016). *Karamoja Investment Profile 2016*. Retrieved on March 18, 2022, from <https://www.ugandainvest.go.ug/wp-content/uploads/2016/04/uia-Karamoja-profile.pdf>. (). Kampala: Uganda Investment Authority. <https://www.ugandainvest.go.ug/wp-content/uploads/2016/04/uia-Karamoja-profile.pdf>

USAID. (2017). *Climate Risks in Food for Peace Geographies: Karamoja Region, Uganda*. Retrieved on April 1, 2022, from: [https://www.climatelinks.org/sites/default/files/asset/document/20170130\\_Karamoja\\_Food%20Security%20Climate%20Screening.pdf](https://www.climatelinks.org/sites/default/files/asset/document/20170130_Karamoja_Food%20Security%20Climate%20Screening.pdf). USAID.

WFP. (2015). *The Impacts of Climate Change on Food Security and Livelihoods in Karamoja*. (). [https://docs.wfp.org/api/documents/WFP-0000069554/download/?\\_ga=2.102651913.969429744.1650140628-1893796010.1650140628](https://docs.wfp.org/api/documents/WFP-0000069554/download/?_ga=2.102651913.969429744.1650140628-1893796010.1650140628)

Yüksel, İ, & Dagdeviren, M. (2007). *Using the analytic network process (ANP) in a SWOT analysis – A case study for a textile firm*. *Information Sciences*, 177(16), 3364-3382. <https://doi.org/10.1016/j.ins.2007.01.001>