

GENDER DYNAMICS IN PASTORALIST LIVELIHOOD SYSTEMS IN AFRICA



Introduction

If asked to describe gender roles in pastoralist settings in Africa, many development practitioners and policy makers might state that men control the livestock and women control the milk and/or the cultivation. These descriptions are accurate to a degree, but the intersection of gender and dryland livelihood systems is—and always has been—more complex than these dichotomies imply. This briefing paper summarizes some of the nuances that exist and the shifts that are occurring within gender dynamics in pastoralist livelihood systems in Africa.

Understanding gender in pastoral settings requires first acknowledging the multiple identities that may be equally as, or more important than, the male/female binary. A gender analysis is an analysis of power, and power dynamics in pastoral contexts occur along lines of age, ethnicity, wealth, marital status, education levels, rural/urban, and initiated/uninitiated, to name just a few. These categories—and the power that inhabiting these categories





Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy FEINSTEIN INTERNATIONAL CENTER



bestows—are in a constant state of change, contestation, and negotiation. Within these relational categories we see differences in the experiences of men, women, girls, and boys and differences in the relationships both among and within these demographic groups.

Livelihood systems in pastoralist areas of Africa today are diverse and dynamic, extending beyond control over livestock and milk or animals and gardens. This paper first briefly covers broad trends in gender roles and relations in the region and then examines several processes of change within dryland livelihood systems that have shifted gender dynamics. To note, Africa is home to a wide range of diverse groups that engage in pastoral production. This briefing paper focuses on East Africa while recognizing that many of the issues covered apply to pastoralists in Central and West Africa. The paper should be read alongside *Pastoralism in Africa: A Primer*, which provides an overview of pastoralism in Africa, and its ecological and economic rationale.¹

Gender roles and relations in pastoralist societies in East Africa

A simplified analysis of gender roles in traditional pastoral production systems yields the following distinctions: men bear primary responsibility for livestock management, with important distinctions according to generation and wealth group. Customary leadership systems primarily follow rules of seniority, meaning that older men wield most of the decision-making power. Younger men, although deferential to their male elders, are the economic pillars of traditional pastoral communities as the caretakers of the herds and protectors of both animal and human populations. Males (both herders and elders) decide on herd management strategies, including seasonal mobility, access to resources, breeding, and purchase and sale. Women's decision-making is confined to the domestic sphere, and women have little direct involvement in herd management. Women engage in market activities to sell surplus items (such as milk and crops) primarily to generate cash to support household needs, including the purchase of cereals, nonfood commodities, and medical care.

While broadly accurate, these descriptions mask complexities based on the variables listed above (wealth, age, location, marital status, etc.) and hide nuances in intrahousehold and community interactions. For instance, women in many pastoral societies do have more control over milk than other livestock products,² but their decision-making around milk goes well beyond the sales of surplus product. Women allocate available milk for home consumption, sale, barter, and social exchange.³ In some locations, women's groups have expanded milk sales into larger, successful businesses. One such example is women from camel-herding groups in Isiolo County, northern Kenya, who first developed and then successfully retained control over a profitable trade in camel milk, including for trade to Nairobi.⁴

The camel milk business in Isiolo County is an example of a pattern in which female commercial enterprises often differ from those of men in dryland contexts. Evidence shows that women may be more willing to experiment with options for entrepreneurship and diversification.⁵ In another example, women from West Pokot, Kenya, set up a business in response to the arrival of teachers in the area who required a supply of firewood, milk, vegetables, and other foods.⁶ Research from both Kenya and Ethiopia shows that women are more likely to form collectives and cooperative groups than men; such groups can dissipate risk and increase profit margins. Despite these innovations, women often face greater difficulties in accessing resources, credit, and assets than

- 1 Hesse and Catley, 2023.
- 2 Little, 1994.
- 3 Flintan, 2011.
- 4 Anderson et al., 2012; Noor et al., 2013.
- 5 Hodgson, 2000
- 6 Karmebäck et al., 2015.

their male counterparts.⁷ These barriers explain, in part, the high prevalence of women-only or womendominated village savings and loans schemes across much of the region; these mechanisms increase women's access to financial products, albeit on a small scale.

Women at times struggle to control their earnings, including from milk sales,⁸ with variations between households and based on the source of their profits. Evidence shows that Borana women in Ethiopia have less control over profits from grain trade than over those from petty trade.⁹ Many women in Karamoja in Uganda have expanded into poultry rearing and sales; women are able to dominate this niche due, in part, to cultural aversions to poultry and associated male disdain for this sector. The embrace by females of this opportunity is another example of their greater willingness to experiment with investments.

Children have important and gender-differentiated roles and responsibilities in pastoral societies in Africa. A girl child's labor is valued highly for its versatility; she is expected to take on domestic tasks from a very young age but can also care for smaller animals, either at the homestead or the mobile livestock camps. In households with livestock, firstborn boys are likely to start training as herders from four or five years of age. If there are additional boys or few animals, boys may assist with domestic tasks, serve as hired herders for other families, or be sent to school. Female school enrollment is on par with that of males in the primary level in many pastoral regions, but girls often drop out at a higher rate and are less likely to complete secondary school than their male counterparts. These discrepancies are due in part to the versatility and value of girls' labor within households, as well as to a perceived low return on investment for educating girls.¹⁰

Processes of change and associated gendered shifts

Diversification of livelihood activities in pastoralist areas has numerous implications for gender dynamics. Engagement in diversified activities by household, season, and year has always been a characteristic of pastoralist systems. As described in the primer on pastoralism in Africa, increased livelihoods diversification is evident across the drylands due to combinations of long-term trends such as population growth, commercialization and declining access to rangelands, and shocks and stresses.¹¹ Common diversified activities outside of pastoral production include wage labor in towns, cultivation (if and when possible), short- term economic migration, and exploitation and sale of natural resources. Expansion into these sectors differs by age and gender. Increased inequality in livestock ownership, barriers to pastoral production, and climate and conflict shocks have translated into a decreased contribution to household food and income from livestock sources in recent years. As men—and particularly young men—are the dominant actors in livestock production, the shift away from this sector means a greater role for women as household providers.¹² Women are also often more adept than men at moving into new sectors, which further contributes to their expansion into diversified activities. However, most of the activities pursued specifically by women are highly labor intensive, with very small financial returns. These include local resale of food and nonfood commodities, collection and sale of natural resources, and brewing: all of these generate extremely minimal profits and require large time investments.

Women already bear a disproportionate load for domestic and reproductive duties; the additional effort on multiple small-scale economic activities further increases their time burden and may decrease their availability for caregiving of young children.¹³ Women's greater economic role at the household level in many East African

11 Hess and Catley, 2023.

13 Catley et al., 2018; Iyer and Mosebo, 2017.

⁷ Flintan, 2011.

⁸ Mcpeak and Doss, 2006.

⁹ Gemtessa et al., n.d.

¹⁰ Stites et al., 2022.

¹² Caravani, 2019;Wangui, 2014.

pastoral regions may strengthen their independence and social status, but some research indicates that domestic violence against women may increase along with their growing economic responsibilities.¹⁴

Men who are no longer engaged in animal husbandry are also diversifying their livelihood activities. This may include working as hired herders or engaging in casual labor on a regular, seasonal, or ad hoc basis, either within the livestock sector (e.g., herders, butchers, livestock traders, brokers, transporters, etc.) or outside of it (e.g., fishing, motorcycle taxi businesses, etc.).¹⁵ Like women, men take advantage of new or lucrative opportunities, including some that typically fall within the female domain. Men in some agropastoral areas are increasingly cultivating alongside women, engaging in natural resources collection and sale (especially charcoal but at times even firewood), and in non-Islamic communities, capturing sectors of the female-dominated brewing industry (i.e., transport of both traditional brew and alcohol). Men are particularly likely to push into traditionally female activities when profit margins from such activities are rising.¹⁶

Commercialization and monetization are longstanding and gradual processes in African pastoralist areas driven by the expansion of markets, economic development, penetration of the cash economy, a greater reliance by households on purchased food and nonfood commodities, extension of road networks, and technological innovations, among other factors. The extent and nature of commercialization and monetization— and their gendered impacts—vary by context and location. For example, women in West Pokot, Kenya, were found to engage in the commercial economy to generate cash for children's school fees. This responsibility was viewed as falling squarely within the domestic—and thereby female—realm, and men were reportedly generally averse to selling animals to meet educational expenses.¹⁷ In northern Unity State in South Sudan, displaced Nuer pastoralists around Bentiu and Rubkona had taken up fishing despite historic social ostracization of fisherfolk in the area. Traditionally a male activity, displaced women around Bentiu had expanded into fishing due to the market demand for dried fish, although gender norms still determined where and how fishing took place, with women fishing in shallower water closer to the shorelines than their male counterparts.¹⁸

Commercialization has allowed new actors to engage in various market transactions. Young men have moved into service provision (transport, trade, butcheries, etc.). Women are increasingly active in livestock markets in some areas, both as a means of generating cash to provide for their households and to build their own capital and/or herds. Women often build capital gradually through natural resources sales, brewing, or rearing poultry. Income from these sources is then used to move into ownership of goats. Women interviewed in various pastoral settings explained that they were happy to continue raising small ruminants as opposed to moving into cattle; this, they explain, is because goats can always be sold when needed for food while also providing milk for household consumption. In addition, men are less likely to challenge women's ownership of goats. Women in some settings are also increasingly engaging in livestock markets as more than customers: in Isiolo County in northern Kenya, more than 50 women from Ngaremara ward have reportedly become livestock brokers, a traditionally male-dominated occupation.

Despite providing new opportunities, commercialization can also have detrimental effects, with variations along gender lines. Evidence from different areas shows that strategies of market engagement by pastoralists differ according to wealth, and that commercialization is associated with increased inequality. Better-off pastoralists use markets to build and improve herds and usually have flexibility to take advantage of low prices caused by

¹⁴ Stites and Howe, 2019.

¹⁵ Caravani, 2019; Iyer and Mosebo, 2017.

¹⁶ Anderson et al., 2012; Tavenner and Crane, 2018; Dolan, 2001.

¹⁷ Karmebäck et al., 2015; Stites et al., 2022.

¹⁸ Krystalli et al., 2019.

distress sales. In contrast, the poor are more likely to sell animals when in distress, meaning they either sell when prices are already depressed, or they accept low sale prices.¹⁹ Selling or losing an animal has a greater impact for small herd owners who lack financial capital and breeding stock to enable herds to recover. Gender does not always align with wealth, but female-headed households are generally disproportionately situated within the most destitute segments of communities. In addition, although women in many countries are legally able to inherit assets (including animals) from deceased husbands, informal norms mean that widows often lose control of all or part of their herds to in-laws or other male family members. These factors combine to make female-headed households in these areas more likely to own small herds, to engage in distress sales, and to face difficulty in rebuilding decimated herds.

Women may also lose out when markets shift from female-dominated barter transactions to those defined by cash and controlled by men. For example, milk has functioned for generations as an important commodity within female-controlled networks of social exchange and reciprocity, but research from Kenya demonstrates how men sought to gain influence and exert control over milk marketing once it became formalized and more profitable.²⁰ Men may also lose out as commercialization increases. As discussed earlier, women are often more adept than men at diversifying into new and varied livelihood activities, including opportunities offered by commercial and urban economies. This means that men often become seen as "idle" in comparison to women following the loss of livelihoods due to animal loss, displacement, conflict, and other factors.²¹ The loss of their role as provider and protector and associated decline in social status can have profound impacts on male identity, gender dynamics, and household livelihood systems.²²

Sedentarization of previously mobile pastoralist populations also has gendered impacts. Reasons for and impacts of sedentarization differ widely and can include both push factors (such as loss of livestock, decreased access to or availability of natural resources, and insecurity) and opportunities (including education, employment, and diversification into more urban-based sectors). Evidence on the impacts of settling is mixed and at times contradictory. Research in the 1990s and early 2000s in northern Kenya pointed to generally negative economic and nutritional outcomes for those who settled compared to those who maintained a pastoral way of life.²³ In contrast, other and some more recent analyses find that gains can occur for women following sedentarization, including around nutrition and economic independence. Such gains are more likely when cultivation and crop sales are possible, as women often have greater control over profits from crops than profits from livestock.²⁴ In addition, limited evidence from Marsabit, Kenya, shows that when settling corresponds to greater engagement in crop agriculture, older people and male youth may increase their involvement in farm activities normally performed by females in order to free up women's time for other income-generating activities.²⁵ However, many pastoralist households that settle are doing so in more urban areas where most economic opportunities are in the casual wage labor and service sectors; these areas are dominated by females and are likely to add substantially to women's already heavy labor burden.²⁶ Men are often better positioned than women to take advantage of the higher-value economic opportunities in urban areas, whereas women are more likely to engage in less-profitable activities with lower barriers to entry, such as sales of wild products.²⁷ Interestingly, other evidence shows fewer divisions in roles and responsibilities between males and female who settle, which

- 21 Gardner and El-Bushra, 2016.
- 22 Stites and Akabwai, 2010; Stites and Howe, 2019.
- 23 Fratkin et al., 1999; Fratkin et al., 2004; Campbell et al., 1999; Shell-Duncan et al., 2005.
- 24 Coppock and Desta, 2013; Karmebäck et al., 2015.
- 25 Smith, 1997.
- 26 Iyer and Mosebo, 2017.
- 27 Achiba, 2018.

¹⁹ Catley and Aklilu, 2013.

²⁰ Little, 1994.



may increase intrahousehold sharing of responsibilities and decision-making.²⁸ On the other hand, more time together may contribute to the domestic violence that is already ubiquitous in many areas.²⁹

Sedentarization in pastoralist areas is neither linear nor uniform. Gendered impacts are similarly varied and inconsistent. Motivations for settling are key determinants, as is household wealth and whether all or part of the household settles. Better-off pastoral households may establish an urban base to facilitate commercial engagement and access to services such as schools. In these instances, women (or one co-wife) and children may settle in a town while other household members pursue transhumant livestock production. This is a very different model than one in which a household settles in or near a town because they have lost all of their livestock; such "pastoral drop-outs" are usually destitute and may have limited skills, capital, or assets required to integrate into urban markets. Data are lacking on the differences (including intrahousehold differences) in the impacts and outcomes between pastoral households who settle as a unit upon losing their livelihoods and those in which one portion settles to take advantage of opportunities.

The impacts of climate change in East Africa's drylands differ by gender and generation. Some of these impacts are captured in the above discussions around livelihood shifts and adaptations associated with diversification, commercialization, and sedentarization. Others remain to be seen and require additional investigation. Just as

²⁸ Hopwood et al., 2015; Karmebäck et al., 2015.

²⁹ Stites and Howe, 2019.

the arid and semi-arid drylands inhabited by pastoralists are by definition a highly variable and nonequilibrium environment, the effects of climate change will also differ greatly by location, season, and year. Much of the existing research on climate change in pastoral areas focuses on livestock loss. While central to male livelihoods and identity, this may not be the most important variable in understanding changes and challenges for women in these settings.³⁰ Cultural norms in many areas mean that pastoral women are likely to have fewer transferable skills and access to resources (including credit and capital) than their male counterparts; these characteristics may make the longer-term adaptations that will be required in response to climate change more challenging for women. On the other hand, women's greater ability to diversify and to innovate in response to changing opportunities may ultimately mean they are much more adept at responding effectively

Conclusion

Gender dynamics in pastoralist areas in Africa vary by group, location, season, and situation. This has always been the case. There are some clear and consistent differences between genders and generations regarding distribution of power and influence; these differences historically fell along lines of control over livestock. Today, livestock ownership and management remain central to pastoral livelihoods and identities at the same time that many other competing and complementary aspects are also important. This greater diversity of engagement, opportunity, and outlook has increased the space for involvement by women and young people to diversify their economic opportunities and take advantage of new opportunities. The increased space has also brought challenges along gendered lines, such as the time burden for women who engage in numerous low- return activities to provide for their families and the risk of negative impacts on caregiving practices. Another challenge is the growing inequality of livestock ownership caused, in part, by the expansion of markets that contributes to a wealth divide as the better-off profit more than poorer small-herd owners. These gains are mostly by well-established men and male-headed households, with younger men and female-headed households finding themselves increasingly unable to amass livestock wealth.

Uncertainty and unpredictability define Africa's dryland areas. The people who inhabit these spaces have adopted and adapted livelihood systems in response to these characteristics. Like the environments in which they function and—at times—thrive, these systems are highly variable and must constantly adjust and adapt. Gender roles and responsibilities in these settings are guided by broad principles, but they too are dynamic, variable, and in flux.

References

- Achiba, Gargule Andrew. 2018. Managing Livelihood Risks: Income Diversification and the Livelihood Strategies of Households in Pastoral Settlements in Isiolo County, Kenya. *Pastoralism* 8 (1): 1–15. <u>http://dx.doi.org.ezproxy.library.tufts.edu/10.1186/s13570-018-0120-x</u>.
- Anderson, David M., Hannah Elliott, Hassan Hussein Kochore, and Emma Lochery. August 2012. Camel Herders, Middlewomen, and Urban Milk Bars: The Commodification of Camel Milk in Kenya. *Journal of Eastern African Studies* 6 (3): 383–404. <u>https://doi.org/10.1080/17531055.2012.696886</u>.
- Campbell, B. C., P.W. Leslie, M.A. Little, J. M. Brainard, and M.A. DeLuca. 1999. "Settled Turkana." In *Turkana Herders of the Dry Savanna: Ecology and Biobehavioral Response of Nomads to an Uncertain Environment*, ed. M.A. Little and P.W. Leslie, 333–352. Oxford University Press.

30 Walker et al., 2022.

- Caravani, Matteo. November 10, 2019. "De-Pastoralisation" in Uganda's Northeast: From Livelihoods Diversification to Social Differentiation. *The Journal of Peasant Studies* 46 (7): 1323–46. <u>https://doi.org/10.1080</u> /03066150.2018.1517118.
- Catley, Andrew, and Yacob Aklilu. 2013. Moving Up or Moving Out? Commercialization, Growth and Destitution in Pastoralist Areas. In *Pastoralism and Development in Africa: Dynamic Change at the Margins*, ed. Andrew Catley, Jeremy Lind, and Ian Scoones, 85–98. London: Routledge.
- Catley, A., R. Lotira, and C. Hopkins. 2018. Hidden Peaks: Women's Knowledge on the Seasonality and Root Causes of Child Malnutrition in Karamoja, Uganda and Their Programming Preferences. Karamoja Resilience Support Unit, United States Agency for International Development (USAID)/Uganda, UK aid, and Irish Aid, Kampala.
- Coppock, D. Layne, and Solomon Desta. 2013. Collective Action, Innovation, and Wealth Generation among Settled Pastoral Women in Northern Kenya. *Rangeland Ecology & Management* 66 (1): 95–105.
- Dolan, C. February 1, 2001. The "Good Wife": Struggles over Resources in the Kenyan Horticultural Sector. *The Journal of Development Studies* 37 (3): 39–70. https://doi.org/10.1080/00220380412331321961.
- Flintan, Fiona. 2011. Changing Nature of Gender Roles in the Drylands of the Horn and East Africa: Implications for DRR Programming. Oxfam Regional Learning and Advocacy Programme for Vulnerable Dryland Communities (REGLAP).
- Fratkin, Elliot M., Eric Abella Roth, and Martha A. Nathan. 1999. When Nomads Settle: The Effects of Commoditization, Nutritional Change, and Formal Education on Ariaal and Rendille Pastoralists. *Current Anthropology* 40 (5): 729–35. https://doi.org/10.1086/300093.
- Fratkin, Elliot, Eric Abella Roth, and Martha A. Nathan. October 1, 2004. Pastoral Sedentarization and Its Effects on Children's Diet, Health, and Growth among Rendille of Northern Kenya. *Human Ecology* 32 (5): 531–59. <u>https://doi.org/10.1007/s10745-004-6096-8</u>.
- Gardner, Judith, and Judy El-Bushra. February 2016. The Impact of War on Somali Men and Its Effects on the Family, Women and Children. Rift Valley Institute Briefing Paper.
- Gemtessa, K., B. Emana, and W. Tiki. n.d. Livelihood Diversification in Borana Pastoral Communities of Ethiopia Prospects and Challenges. Unpublished report by WABEKBON Consult, Addis Ababa.
- Hesse, C., and A. Catley. 2023. Pastoralism in Africa. A Primer. USAID, Washington, DC; Feinstein International Center, Friedman School of Nutrition Science and Policy at Tufts University, Boston; International Institute for Environment and Development, Edinburgh.
- Hodgson, Dorothy. 2000. "Gender, Culture and the Myth of the Patriarchal Pastoralist." In *Rethinking Pastoralism in Africa*, ed. Dorothy Hodgson, 1–29. Oxford, UK: James Currey.
- Hopwood, Julian, Holly Porter, and Nangiro Saum. 2015. Karamojong Women and the Extremes of Insecurity. London: Justice and Security Research Programme (JSRP) Paper 27, JSRP, London School of Economics. <u>https://assets.publishing.service.gov.uk/media/57a089a1e5274a31e00001b2/JSRP27.Hopwood.pdf</u>.

- Iyer, Padmini, and Marianne Mosebo. 2017. Looking for Work: Wage Labor, Employment, and Migration in Karamoja, Uganda. Karamoja Resilience Support Unit, USAID/Uganda, UK aid, and Irish Aid, Kampala.
- Karmebäck, Vera N., John Ndung'u Wairore, Magnus Jirström, and Gert Nyberg. November 2015. Assessing Gender Roles in a Changing Landscape: Diversified Agro-Pastoralism in Drylands of West Pokot, Kenya. *Pastoralism* 5 (1): 1–8. <u>https://doi.org/10.1186/s13570-015-0039-4</u>.
- Krystalli, Roxani, Elizabeth Stites, Alex Humphrey, and Vaidehi Krishnan. 2019. The Currency of Connections: The Establishment and Reconfiguration of Informal Livelihood Groups in Bentiu, South Sudan. Feinstein International Center, Friedman School of Nutrition Science and Policy at Tufts University, Boston.
- Little, Peter. 1994. "Maidens and Milk Markets: The Sociology of Dairy Marketing in Southern Somalia." In *African Pastoralist Systems:The Frontiers of Theory and Method*, ed. Elliot Fratkin, K. Galkin, and Eric Abella Roth, 165– 184. Boulder, CO: Lynne Reinner Publishers.
- McPeak, John G., and Cheryl R. Doss. 2006. Are Household Production Decisions Cooperative? Evidence on Pastoral Migration and Milk Sales from Northern Kenya. *American Journal of Agricultural Economics* 88 (3): 525–41. <u>https://doi.org/10.1111/j.1467-8276.2006.00877.x</u>.
- Noor, Issack Mohamed, Abdi Yakub Guliye, Muhammad Tariq, and Bockline Omedo Bebe. December 2013. Assessment of Camel and Camel Milk Marketing Practices in an Emerging Peri-Urban Production System in Isiolo County, Kenya. *Pastoralism* 28:1–8.
- Shell-Duncan, Bettina, Walter Obungu Obiero, and Leunita Auko Muruli. 2005. "Development, Modernization, and Medicalization." In As Pastoralists Settle: Social, Health, and Economic Consequences of Pastoral Sedentarization in Marsabit District, Kenya, ed. Elliot Fratkin and Eric Abella Roth, 235–53. Studies in Human Ecology and Adaptation. Boston: Springer US. https://doi.org/10.1007/0-306-48595-8 12.
- Smith, Kevin Christopher. 1997. From Livestock to Land: The Effects of Agricultural Sedentarization on Pastoral Rendille and Ariaal on Northern Kenya. PhD thesis, The Pennsylvania State University. <u>http://search.proquest.com/docview/304369770/abstract/93D45AA5AC0741A6PQ/1</u>.
- Stites, Elizabeth, and Darlington Akabwai. 2010. "We Are Now Reduced to Women": Impacts of Forced Disarmament in Karamoja, Uganda." *Nomadic Peoples* 14 (2): 24–43.
- Stites, Elizabeth, and Kimberly Howe. 2019. From the Border to the Bedroom: Changing Conflict Dynamics in Karamoja, Uganda. Journal of Modern African Studies 57 (1): 137–59.
- Stites, Elizabeth, Barbara Athieno, and Caroline Dyer. 2022. Educating Girls in Karamoja, Uganda: Barriers, Benefits, and Terms of Inclusion in the Perspectives of Girls, Their Communities, and Their Teachers. Karamoja Resilience Support Unit, Feinstein International Center, Friedman School of Nutrition Science and Policy at Tufts University, Kampala.
- Tavenner, Katie, and Todd A. Crane. September 2018. Gender Power in Kenyan Dairy: Cows, Commodities, and Commercialization. Agriculture and Human Values 35 (3): 701–15. <u>https://doi.org/10.1007/s10460-018-9867-3</u>.

www.feedthefuture.gov

- Walker, Sarah E., Brett L. Bruyere, Jennifer N. Solomon, Kathryn A. Powlen, Apin Yasin, Elizabeth Lenaiyasa, and Anna Lolemu. 2022. Pastoral Coping and Adaptation Climate Change Strategies: Implications for Women's Well-Being. *Journal of Arid Environments* 197:104656. <u>https://doi.org/10.1016/j.jaridenv.2021.104656</u>.
- Wangui, Elizabeth Edna. September 3, 2014. Livelihood Shifts and Gender Performances: Space and the Negotiation for Labor among East Africa's Pastoralists. *Annals of the Association of American Geographers* 104 (5): 1068–81. https://doi.org/10.1080/00045608.2014.924734.

Acknowledgements

The production of this briefing paper was funded by the United States Agency for International Development via Cooperative Agreement No. 7200AA21CA00020, Pastoralism in Africa, to the Feinstein International Center, Friedman School of Nutrition Science and Policy at Tufts University. The author of the paper is Elizabeth Stites.

Photo credits: © FAO/Giulio Napolitano; © FAO/Max Valencia.







FRIEDMAN SCHOOL OF NUTRITION SCIENCE AND POLICY Feinstein International Center



This study is made possible by the generous support of the American people through the U.S. Government's Feed the Future Initiative, implemented by United States Agency for International Development (USAID). The contents are the responsibility of the Feed the Future Pastoralism in Africa activity and do not necessarily reflect the views of USAID or the United States Government.

www.feedthefuture.gov