

A Contextual Review of Maasai Well-Being in Tanzania

An Annotated Bibliography

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1. Introduction

Cultures evolve – a natural process from within but also a result of changing conditions and influences from outside. Change can be positive and bring significant improvements in well-being but it can also be stressful and undermine long held beliefs and traditions that give meaning to life in the community. While significantly strong as a culture, the Maasai throughout Tanzania, like other indigenous cultures around the world, have been experiencing continued and increasing pressure on their traditional lands, resources and lifestyles. This pressure comes most prominently from: environmental change; population growth within the Maasai community; the expansion of non-Maasai residential growth and expansion of adjacent communities and its associated conflicting land use; and, persistent government policy to restrict and even eliminate pastoralism. As pressure increases on the fundamental resource base upon which pastoralism depends, the Maasai are forced to seek alternative ways of supporting their families and communities while maintaining and adapting their cultural traditions and resources.

The Loita Maasai of Enguserosambu Ward and the Parakuiyo Maasai living in the village of Elerai in Kilindi District have joined with other Canadian based partner organizations to build strong learning relationships and enhance knowledge bridging between Indigenous peoples in Canada and Tanzania who share the same goals. Together, with financial support from the Social Sciences and Humanities Research Council of Canada (SSHRC), they are implementing a project titled: Indigenous Knowledge Bridging of Land and Water Governance in Tanzania and Canada (IKG). As partners in the IKG project, these Maasai communities are keen to have the assistance of Canadian partners to document the current status of key economic, environmental and social factors that influence their community lifestyles and development and to consider alternative strategies for the future of their communities. Specifically, the project is intended to improve our collective understanding of the role of culture in: a) the management and conservation of the natural and cultural resources of traditional territories; b) the strengthening and broadening of livelihood benefits; and, c) the implementation of strategies to adapt to change and improve community well-being.

The IKG has identified six areas of research that can assist in addressing the intended goals of the project: a) a livelihoods assessment to better understand the local Maasai economy; b) an ecological and climate change impact assessment to determine the community perceptions of environmental vulnerability and its impact on livelihoods; c) an assessment of ecotourism potential, expectations and impacts; d) community mapping to identify and document cultural and land-use sites of importance; e) a needs-assessment to identify community challenges and priority development actions; and, f) a scenario planning exercise to identify community issues,

key drivers of change, current trends, and the development constraints. These factors will also be ranked by importance and the degree of certainty.

This annotated bibliography forms part of the initial research activities of the project. It focuses heavily on understanding the Tanzania context although generally the Maasai homeland extends throughout much of Tanzania and Kenya. Cross border studies are helpful although the backdrop for land ownership and administration issues differs significantly between the two countries. The structure of this analysis has thus been developed to be in line with the focus areas of the IKG and in so doing looks specifically at the research context of Maasai communities in Tanzania and along the border with Kenya. The following narrative draws together and discusses the related documentation from the selected published literature (annotated in the appendix) on the impacts of a wide range of influences on the cultural traditions and lifestyles of the Maasai people.

2. Maasai Demography and Cultural Change

The Maasai are pastoralists whose culture has been defined in large measure by their free movement to take advantage of seasonally shifting resources. Three major and related physical transforming forces are actively bringing about change from past traditions. The first is population growth within the Maasai community itself but also within the broader population. The second is the resulting land constraints that accompany that growth. Third is the changing environment brought about by climate change.

Growing pastoralist populations require more land to sustain them and since the same is true for non-Maasai growing populations, competition for land is increasing dramatically. In Kenya and Tanzania combined the Maasai population is estimated to have well exceeded 2 million¹ divided roughly evenly between the two countries. Population growth has been rapid, estimated at about a 50% increase over the past decade. Tanzania's population has seen similar growth and is one of the fastest growing populations in the world. From approximately just over 30 million in 2000, the country has reportedly surpassed an estimated 62 million². The trend for land constraints is heading in the opposite direction. More and more of the traditional lands of the Maasai are being converted to alternative land uses such as settlement, urban development, transportation infrastructure, resource development such as mining, agriculture (both local and large scale commercial) and conservation. It is not surprising therefore when these two forces are moving in opposite directions that challenges will result. Compounding this process is the land transformation being driven by changes in climate resulting in loss of productivity and increased erosion (Filho et al, 2017; Kimaro et al, 2017).

¹ Statistics for Maasai cultural identity are not kept in Tanzania. The population of the Maasai in Kenya in 2019 was recorded to be 1,189,522. In 2011, the estimated population of Maasai in Tanzania was 800,000. Given that the Tanzania population in 2002 was estimated at approximately 400,000 a similar rate of increase would place the Tanzania population above that of Kenya resulting in a total of over 2.5 million.

² This is a population estimate. The last official census was 2012 and Tanzania's growth rate hovers around 3%.

At the same time two ideological forces also contribute significantly to this change. The first is the influence of western culture with its different thinking, values, technologies and, perhaps most importantly, economics (Allegretti, 2018; Baird and Gray, 2014). The second is the influence of western religion, specifically Christianity, which is the dominant religion adopted by the Maasai. These ideological forces tend to be felt strongly by different groups – women prominently affected by religion and the young influenced prominently by western culture (Pesambili, 2020; Massoi, 2018). These transforming forces add pressure for division within the society and changes in cultural beliefs and practices. All these forces, both physical and ideological, work together, in various combination with varying degrees of intensity, to bring about cultural change.

In a Kenyan study (Ahmed et al, 2014), four critical aspects of culture were identified along with the challenges that create pressure for change. The most important of these elements was social connectedness. Pressures such as privatization of former communal lands, school attendance (with the associated uniforms, English instruction and lack of culturally focused curriculum) and economic incentives for outside employment were identified as important challenges that are dividing families and communities both physically and ideologically. The second ranked cultural element in the study was dress and ornaments. Like school attendance, employment elsewhere and even in some local jobs such as community game scouts, uniforms or western style clothing are the norm and replace the traditional attire. The exception was seen to be jobs in tourism where traditional practices and clothing were considered an asset. However, in other studies (Buzinde et al, 2014) this practice was considered to be a limiting factor that kept Maasai employees at a very low employment level and forced them to forego advancement and management positions in tourism businesses.

The third priority element of culture was the connection with wildlife and nature. Privatization of land frequently led to fences, reduced movement of cattle and diminishing quality of rangeland. Interaction with wildlife on natural grasslands was further diminished as more permanent settlements developed and wildlife avoided such areas. Other factors such as climate change, which through drought impacts range quality, and conservation, which has challenged the traditional practice of lion killing, have also accentuated the separation between Maasai culture and nature. Another study (Wijngaarden 2020) explores the culture / nature relationship in detail and describes how a better understanding and a less Eurocentric approach to thinking about change would help articulate a more indigenous perspective.

The fourth priority cultural element was the practice of Moranism. Population growth means that each moran has significantly more members and pressure on the lion population for the traditional killing of a lion became untenable. Similarly the role of warrior and protector of the

community becomes much less meaningful when settlements are more permanent, the members more geographically dispersed and wildlife less plentiful.

Shifts in culture are not always direct and obvious. One would think that the impacts of new technologies would be relatively easy to identify and understand. Baird and Hartter (2017) did indicate that mobile phone technology for example did have direct impacts on livelihood activities, assisting with such things as reporting of livestock predation, cattle market pricing weather forecasting and money transfer. At the same time however, Maasai users reported negative changes to traditional communications patterns especially relating to the rise of misinformation, distrust and even theft. Such breaking down of cultural traditions in communication, especially with its traditional hierarchical structure, will clearly introduce change. The influence of technological change can also be found in another avenue. Huggins (2018) reports how GIS technologies have been adopted for community land use planning in Tanzania, allowing broader inputs and analysis which makes the planning process more efficient and effective. However, the low level of capacity among the local people to be able to understand and use the technology, results in greater involvement and influence in the planning process by higher level stakeholders such as government and NGOs who are external to the communities and may have significantly different interests. Such technological applications can therefore separate the people from the direct engagement with decisions for local land use in a way that was not foreseen. This can have a divisive effect of accentuating inequitable access to information and decision-making.

Christianity, has also played a significant role in key aspects of cultural transition. Trends in family structure show decreasing numbers of wives, fewer children, and changes in the role of women in Maasai society (Massoi, 2018). Considerable work has focused on the vast array of shifting gender roles beyond women's traditional roles as wives and mothers. One significant area is related to access to land and resources, including inheritance and ownership (Goldman et al, 2016; Massoi, 2019). Many studies, especially in the area of land inheritance for women, indicate the challenges presented by the dual system of land governance which protects the rights to land for both women and men equally under statutory law but at the same time supports the application of customary law which in the case of the Maasai subsumes the rights to land for women under those of their husbands (Massoi, 2019).

Other aspects of women's engagement with land and resources are also being identified. Archembault, (2016) explores the importance of women's social networks for accessing grazing rights especially in the context of diminished availability of communal pasture. The prominence of women's roles in social and family networks is shown to be important in the current situation where pasture and especially water sources are increasingly being limited by fragmentation and privatization of land. In another study, while not necessarily a complete shift of roles, Yurco (2018) investigates the responsibilities of women with respect to milk production and food

security. This analysis has not been commonly studied and the results point to the importance of a nuanced understanding of the dynamics of household and interhousehold resource management.

Another notable area of gender role changes is the increased participation by women in business (Smith, 2015). This is another aspect of women's empowerment that is frequently promoted by religious organizations and development NGOs and studies show that it has a positive impact as women describe the importance of having their own money and a measure of independence in the way they spend their time. These studies, however, have not focused on the relationship changes such empowerment brings and the implications for cultural transition.

These areas illustrate role changes where women are experiencing greater independence and individual freedoms. However, rather than characterizing the changing role of women as a dramatic break from tradition and a negative force of change for the society as a whole, it is also possible to consider such gender shifts as good and a natural process of modern Maasai culture (Allegretti, 2018). Perspectives on culture and shifts in culture to modern times is also addressed by Wijngaarden (2021) utilizing a nature / culture relationships focus. Such reflections are useful in putting the many different aspects of cultural change into a broader context.

Changing economic systems have had an impact on culture. Allegretti (2018) uses an example from northern Tanzania to illustrate the changing dynamics of economic systems especially on the rural-urban interface. While Allegretti presents his example in a positive light of adaptations in a changing culture, Baird et al (2014) provide an interesting reflection on the impacts of cultural change through what is lost as well as what has been created. In their paper, they acknowledge the changing economic system that characterizes Maasai communities but show that it is the personal networks and traditional practices of cooperation and caring shown in the form of gift giving and loans that make way for diminished trust and more caution in the dealings with other members of the community. The long term implication of such a shift is significant in the eyes of the authors since while small shocks may be weathered more effectively by greater levels of independence, larger shocks may find the resilience in the community diminished to an extent that negative outcomes become more likely and severe.

One of the major drivers in the changing role of women is education. Western donors have promoted education and especially girls education. The NGO sector has been a major actor in implementing programs to support education and changing attitudes are frequently reported (Raymond, 2021). However, there is still a significant negative attitude towards education and especially girls education among older Maasai men (Hedges et al, 2016) but also concern for the culture as a whole among those that feel the education system as it is, being western focused and of poor quality, is not the most suitable way to equip young people for a modern life or maintain their cultural roots (Pesambilli, 2020).

A very prominent part of the education debate is the fact that it becomes a strong force that takes young people away from the community. Migration for education as well as for employment is an important result of the pressures described above. Push factors such as climate change reducing pastoralist productivity and population growth requiring greater support of the family (Goldman and Reiseni, 2013; Kimaro et al, 2017) and pull factors such as education for increasing employment potential and direct wage employment (Pesambili, 2020) are shown to strongly influence the decisions of especially youth to either remain in the community or move to the larger towns and cities (Malipula and Theodory, 2017). Pesambili (2020) noted that many adults in the community fear that such a migration trend will have long-lasting impact on the Maasai culture as youth are perceived to be leaving their traditions behind. This is accentuated by the reality of intercultural marriage as a result of young people's absence from their home communities (Malipula and Theodory, 2017). Pesambili also concluded that the push for education and employment beyond the community may in fact be a false hope given the current employment context.

3. Maasai Resource Management / Conservation

The same forces that are putting pressure on culture and social structure within Maasai society are similarly influencing the ways that households and communities manage resources. However, additional forces also take a primary role in the nature of change. Perhaps one of the most significant is the competition for resources and the resulting changes to rights of access. State and international interests in resources access and use is largely determined through the central government's system of land administration. Policies for economic growth and development have been the priority as shown in the significant expansion of large-scale commercial agriculture and as a result the Maasai pastoralists have been displaced from extensive areas of their traditional rangeland (Makulilo, 2019). Indeed, pastoralism as a lifestyle has been considered by government as unproductive and policies have targeted its complete abandonment (Bergius et al 2020).

A significant example of the impacts of such government initiatives is the Southern Agricultural Growth Corridor of Tanzania (SAGCOT), initiated in 2012 (Maganga et al 2016). SAGCOT is described as: "public-private partnership that seeks to mobilize private investments across the agricultural value-chain and develop commercially successful and sustainable agriculture" (Bergius et al, 2020). The example illustrates the priority given to international interests and economic development over small scale, traditional, household livelihood endeavours. While this example is a prominent one nationally, many others have been implemented in the past and continue to be imposed on communities on smaller scales around Tanzania.

Land administration in Tanzania was profoundly influenced by the process of villagization (ujavitu) in the 1970s. While the Maasai tended to discount the process in the short term and

returned to their traditional practices (Selemani, 2014), the longer term impact land use decision-making being controlled by the government institutions has been more significant. This was a fundamental shift for the Maasai away from traditional management of rangeland and resources. Government interests are now entrenched in the village planning processes even beyond the large scale controls that the central government maintained with respect to, allocating land to investors and national commercial interests (Huggins, 2018; Bergius et al, 2020).

Competition for rangeland has also been hugely influenced by the international conservation movement. Very large areas of the Maasai traditional territory were taken over for conservation in the early years of the movement to create conservation areas such as the Serengeti, Ngorongoro and other of the large national parks, such as Tarangire and Manyara national parks now part of the northern tourist circuit (Mittal and Fraser, 2018). The Maasai were evicted from these areas or in the case of Ngorongoro been allowed to stay but under difficult conditions (Melubo and Lovelock, 2019; Saruni, 2016). But conservation has not been satisfied with the initial areas but have continued to expand the network often with other forms of protected areas some of which have an intention of embracing local use along with the conservation agenda (Blewstein et al, 2016). The outcome, however, has been to seriously restrict movement of cattle and in particular to access water sources in the dry season (Moyo et al, 2016; Salerno et al, 2016). Increased competition with wildlife as a result of increasing wildlife populations has also been a direct result of the conservation efforts increasing both the loss of property (livestock and crops) and the loss of human life. It is useful to reflect on the relationship between the international conservation movement and the rights of local indigenous people like the Maasai. Much has been written on the intentions of building a conservation system that recognizes local authority and traditional conservation practices but the implementation of such philosophies, especially in a country like Tanzania that simply doesn't recognize indigenous integrity and rights, is extremely difficult (Maganga et al, 2016). The thinking itself, as Gardner (2017) suggests can also be viewed with a certain level of suspicion. Much of international conservation and its support for indigenous rights stems from a relationship with tourism as a means of support. Gardner suggests, however, that this concept of serving elite interests to support indigenous rights and economic development has its flaws. Using an international campaign to oppose road development in the Serengeti, he illustrates the prevailing western agenda and approach to imposing conservation at the expense of maintaining traditional cultures and their relationship with their homeland.

One of the more recent prominent forms of conservation that has been put in place by the Tanzanian government under the major influence of international conservation organizations is the Wildlife Management Area (WMA). Promoted as community based conservation, WMAs have struggled to achieve their intended community objectives although they have certainly increased land dedicated to conservation at the expense of the local villages. Reviews of the WMA program have not been very positive (Moyo et al, 2016; Kiwango et al, 2015; IRA, 2007;

Kangalawe and Noe, 2012). In many instances currently, Maasai communities are resisting WMA establishment while in others, where WMAs already exist, villages are seeking to withdraw (Sulle and Banka, 2017). The administrative structures are complex and the required 'guidance' from beyond the communities themselves (sources such as government and NGOs) is significant due to limited capacity at the community level. Such administrative structures have also led to general feelings of disempowerment where communities feel as though they have lost control over their own lands (Dekker et al, 2020; Bluwstein et al, 2016). Benefits are not being realized and achieving equity in distribution of what benefits exist, is a challenge. Mistrust and financial mismanagement do not help promote the conservation mechanism. Furthermore, the restrictions on more productive uses in the minds of the villagers pose serious challenges for livelihood pursuits (Sulle and Banka, 2017). A number of specific studies of WMAs, especially in the northern regions of Tanzania illustrate these challenges (Dekker et al, 2020; Sulle and Banka, 2017; Bluwstein et al, 2016; Moyo et al, 2016;). With the most economically viable areas located in crucial tourist areas adjacent to the national parks, it is not surprising that the impacts of these designations have been felt by Maasai communities. Restrictions on grazing areas and increased wildlife populations which bring increasing human wildlife conflicts are key issues reported in recent studies (Selerno et al, 2016).

Compounding these large scale land use pressures are the changing environmental conditions resulting from climate change. The dominant changes appear to be less rainfall and more erratic patterns of rainfall, resulting in more frequent and extended periods of drought (Nnko et al, 2021). Studies in the northern rangelands of Tanzania document these dominant conditions and the Maasai have been shown to be very reliable in terms of recalling when they have been severe and how often such challenges occur (Kimaro et al, 2017; Bobadoye et al, 2016). The implications are more frequent droughts which diminishes the quality and extent of rangeland and results in increasing incidence of disease among livestock (Kimaro et al, 2017). While the Maasai have always coped with drought in the semi arid grasslands of their homeland, the conditions are increasingly problematic. Drought is more frequent and more severe (Bobadoye et al, 2016; Goldman and Riosmena, 2013). Water supply is already an issue but increasingly will be a major challenge for pastoralists. Some studies have begun to question future expectations as well and participants recognize the increasing problems with serious concerns for supply and effective and equitable governance of the resource in the future (Borona, 2020; Carette, 2015). While recognizing climatic challenges as a prominent factor, participants also acknowledged that the combination of reduced access to land and resources accentuates the challenge for the future.

Governance of land and resources presents serious challenges to Maasai communities. Cultural control over homelands has been replaced by the land administration systems that came with colonialism and were perpetuated by the independent state governments (Selemani, 2014). When land use decisions are controlled by a government that sees pastoralism as unproductive and outdated and seeks to replace it with commercial production of livestock and agriculture, it is

understandable that the Maasai would struggle to assert rights to their traditional territories. In Tanzania village governments operate alongside traditional authority mechanisms. Land use planning at the village level is still controlled by government (approvals) and have been readily be overridden by decisions at higher levels of authority for specific land and resource use initiatives or applications (e.g. mining, large scale commercial agriculture, conservation) (Bergius et al, 2020). The complexity of the process and generally low capacity for emerging technologies being used, as described earlier, can also distance the people from the planning process as external interests gain greater influence and control on the process (Huggins, 2018). Cost and time factors also influence the ability of local people to be involved in their own community planning.

Land rights has been a difficult issue for the Maasai in response to such pressures. They are largely forced to adapt to such trends such as the privatization of land which is shrinking the commons around which their communities and culture revolved (Rabinovitch et al, 2020; Archembault, 2016). The national policies in Kenya for example that initiated the establishment of game ranches that privatized land and began restricting widespread mobility led to an expansion of the principle even though the ranches themselves have proved difficult as a land management system (Borona, 2020). In Tanzania evictions from traditional lands in favour of other land uses and users has led to many flash points of conflict (Makulilo, 2019). The only recourse it seems for the Maasai is to challenge such cases in court generally under the principles of international conventions to which Tanzania has signed on but is not inclined to uphold (Askew et al, 2013).

4. Maasai Livelihoods

Pressures on culture, land and resources strongly influence the livelihood patterns and decisions of households within Maasai communities. As a fundamental aspect of well-being, livelihood activities and choices are extremely important. A prominent shift in pastoralist activities has come about with the inclusion of small scale agriculture into the household activities. The timing of this transition has been different from one area to another as has been the level of acceptance among households. Selemani (2014) described the transition to agro-pastoralism as being strongly linked to the villagization process. Government pressure to plant crops has also been a factor in recent years although the Maasai have not always taken on the agriculture activity with great enthusiasm. McCabe et al (2010) provides a useful differentiation of what in some instances may be stages of engagement with agriculture but in others may reflect the level which is considered acceptable by the household. It is predominantly the women that engage in the activity, especially at the smaller scales. Adoption of agriculture, at whatever scale, can be in response to the challenge of food security. Changing environmental conditions and land restrictions among other pressures has made food security under traditional practices more difficult and the supplement from an additional source is perceived to be valuable. However, Nderumaki et al, (2016) suggest that agriculture does not significantly address food security but

rather may have the opposite effect of depleting pastureland quality and productivity, especially in fragile ecosystems such as the semi-arid grasslands of northern Tanzania.

As a supplement for traditional food sources agriculture has become increasingly important especially in times of drought since maize, the preferred crop, can be stored for considerable time and storage to assist in times of hardship has developed as a food security strategy. Food security has also had the implication of changing Maasai diets, particularly the general shift from animal-based products to what is available in the local markets (Ripkey et al, 2021).

As a more recent diversification strategy, participation in the market economy through small businesses is becoming more common, especially by women (Nkedianye et al, 202; Filho et al, 2017; Smith, 2015). Such participation marks one of the changes of supply from within the household to supply from outside the household – money instead of cows. Similarly wage employment has increased markedly in recent years especially among young men moving to other areas (Ripkey et al, 2021; Pesambili, 2020). Such migration from the village can certainly be helpful when remittances are returned to the family household. The mobility of people from the community has made remittances, from within the country or from abroad, a much more significant influence in household income (Birch-Thomsen and Friis-Hansen, 2021).

An important area of wage employment for the Maasai has been the tourism sector because of its strong relationship to the Maasai homelands and also drawing on the iconic Maasai culture (Buzinde et al, 2014; Snyder and Sulle, 2011). Community agreements with tourist companies to operate on village lands have promoted such employment whether such agreements have been part of WMA structures or not (Woodhouse and McCabe, 2018). In situations where communities are well located to established tourist resources and destinations, these agreements have been beneficial although not without their challenges. However, some local wage employment has developed because many companies have promoted the Maasai presence to add to the tourist's experience. Frequently, such employment is at a very basic level usually craft shops and security guards at tourist sites, although these are also a major sector of employment in the urban areas (Hooli, 2018). However, this type of employment typically does not lead to advancement to other positions of more responsibility and higher salaries. Cultural tourism, where communities more directly involved in the programs offered to tourists and where crafts can be sold, has also become significant as a economic generator (Melubo and Lovelock, 2019). It is definitely not without its challenges since women are prominent in the activity and combining this with their myriad of other household responsibilities is sometimes difficult. Lwoga and Asubisye (2018) recognized that seasonality can play a role in determining the level and timing of activity. In the same study a more disturbing finding was the way tourist companies, and especially individual tour guides, can take advantage of the women in their tourism related businesses by charging exorbitant fees for bringing customers or requiring a high percentage of sales.

Some studies have also attempted to draw on well-being frameworks to assess the impacts of change generally on the people in Maasai communities (Buzinde et al 2014; Woodhouse and McCabe, 2015). This work, especially Buzinde (2104), has tended to show a strong bias for economic factors over social and cultural ones. It is difficult to conclude whether such a balance reflects the perspectives of the Maasai themselves or whether there is a need for further, more in-depth analysis of the issue. Certainly more research in this area would be welcome.

5. Conclusion

While change is inevitable for everyone regardless of culture and location, the amount of pressure on Maasai pastoralists for change appears to have been extremely intense and excessive. Like other indigenous groups, the intent of outside pressure seems to be more about removal of traditional practices and people's connection to the land rather than celebrating a culture and working to accommodate changing conditions and systems. Naturally there are many Maasai that wholly embrace some of the changes that have been discussed earlier in this paper. However, what is critical is whether those changes are self motivated or whether they are the result of an outside agenda.

Regardless of the process what is clear is that the experience of change has had significant cultural implications – some seen as positive and some as negative.

Considerable work has been reported on in this paper and from an understanding of this work a number of areas for further research have been identified. They are:

- livelihood adaptations – change will continue and will be felt differently in different areas of the Maasai homeland. Continuing efforts to document the livelihood adaptations that are introduced in response to major pressures such as climate change and conflicting land use should be undertaken.
- climate change impacts – the potential severity of climate changes in the semi-arid environment of much of the Maasai homeland is a major concern. It will have important implications and continuing research is needed to document the change itself and its impact on natural biodiversity and critical resource
- migration influences on culture – given the increase of the Maasai population, the promotion of education and the attraction of wage employment, increasing migration especially by young people from their home communities can be expected. This will have major implications for both the communities themselves but also for the culture that is being fragmented across a generation. Research that monitors such trends and their implications will be valuable in understanding what development strategies are most

appropriate for local communities and what response cultural groups can have to address the expected transition.

- women's roles – significant changes are being felt in the roles of women within Maasai society now. Many provide an independence that has not been felt before but they also bring changes in the nature and connectedness of families both internally and with the broader community. Research should continue to identify the nature of those changes and the implications.
- land tenure – systems of land tenure are notably different between Kenya and Tanzania. A comparison of these systems and the circumstances that caused their adoption could provide insight for future changes to land management systems that are most sensitive to cultural priorities and that avoid some of the difficulties that have been experienced.
- community decision-making – little work has been done in the area of the processes for decision-making in communities. The distinction between traditional processes and government systems is especially important in this regard. Such research would be extremely helpful especially for issues related to land use as well as to participation in and ongoing management of WMAs. The role of women in these processes should be considered a particular focus.
- cultural resources – little research has been carried out that focuses on cultural resources, their significance and the level of threat they face. This is an important area of work that would help to raise awareness on the level of cultural change among the Maasai community itself and would enable better decisions on how to address the protection of cultural resources.
- well-being – current research shows a very strong economic focus when assessing well-being. Studies that explore people's perceptions of what factors contribute to well-being and work that identifies people's assessment of their own situation with respect to those factors would help to clarify household needs and priorities for community supported development.

References

6. Annotated Bibliography

1. Ahmed, Z., Booth, L., Njagi, L., & Stephanou, E. (2014). The warrior's dilemma: can Maasai culture persist in a changing world. *The Journal of Sustainable Development*, 13(1), 300–311.

Drawn from the Maasai of the Amboseli ecosystem, this paper identifies the crucial components of Maasai culture that are especially valued, the threats that endanger those characteristics and the strategies being used to sustain the culture in the face of such pressures. It is an initial overview based on limited time and data.

Four cultural elements are identified as being especially valuable to maintaining culture: social connectedness, dress and ornaments, the connection with wildlife and nature, and the practice of Moranism. Each is discussed briefly. The primary threats identified in the review are: conservation, education, westernization, land ownership, declining wildlife populations and climate change. The analysis of these complex topics and relationships is fairly superficial but does highlight the essence of the key areas of challenge.

The perspective of the article is very much a western one with considerable input being provided to the study from western conservation organizations – in spite of conservation being consistently identified as a challenge that is undermining the sustainability of the culture.

2. Allegretti, A. (2018). Respatializing culture, recasting gender in peri-urban sub-Saharan Africa: Maasai ethnicity and the 'cash economy' at the rural-urban interface, Tanzania. *Journal of Rural Studies*, 60, 122–129. <https://doi.org/10.1016/j.jrurstud.2018.03.015>

This article challenges the perspective of changing Maasai culture as 'loss' and describes a more spatially based dynamic of what is the "modern Maasai" with its changing roles for both men and women. The case study approach is conducted in the peri-urban environment and interaction between a Maasai village and a town along the Arusha Ngorongoro highway. The article presents an interesting perspective on the adaptations in Maasai life to the forces, especially economic in relation to the interplay between the livestock-based economy and cash economy, that add pressure to the cultural traditions of Maasai society.

3. Archambault, C. S. (2016). Re-creating the commons and re-configuring Maasai women's roles on the rangelands in the face of fragmentation. *International Journal of the Commons*, 10(2), 728–746. <https://doi.org/10.18352/ijc.685>

As part of a much larger and longer term ethnographic investigation in the study area of southern Kenya, this paper focuses on the adaptations to fragmentation of grazing land and the implications for women's roles within pastoralism. Through a case study approach and a herd tracking exercise, the author collected detailed information on the patterns of grazing and the negotiations necessary to gain access under conditions of increased privatization of common pasture land.

The results showed an increasing dependence on social networks as a means of ensuring grazing access with a strong role for women in the process. Their social networks tended to be stronger and more influential. Furthermore, with more restricted livestock movement and a greater pressure on diversified livelihoods, livestock remained closer to home and women become increasingly involved in the care and management of livestock.

While the historical processes of changes in tenure are more specific to Kenya, the paper raises important concepts with regard to the adaptations in response to breakdowns in pastoralist traditions brought about by fragmentation of land. Such lessons are worthy of comparative study

in Tanzania as well since land tenure and pressures on land use are creating similar stresses albeit in subtly different ways.

4. Baird, T. D., & Gray, C. L. (2014). Livelihood diversification and shifting social networks of exchange: A social network transition? *World Development*, 60, 14–30.
<https://doi.org/10.1016/j.worlddev.2014.02.002>

This is an important paper with a contribution that has been understudied and yet with seemingly significant implications for Maasai society and cultural integrity. The nature and extent of traditional mechanism of social support and reciprocity as sources of household security and social cohesion are the focus of this study. Naturally as societies pursue more individualistic approaches to household security in the face of economic shocks, processes that are collective and draw on the strength of cultural connection will be increasingly difficult to utilize.

The authors present a view of traditional Maasai culture in this respect – one that captures a greater breadth of characteristics of the society especially those beyond the economic and more closely aligned with cultural responsibilities and relationships of trust and caring. Gift giving and loans, as the primary mechanisms discussed in this context, are analyzed in their shift from the past to present both in terms of their purpose and practice. The analysis points up some important trends – a decrease in trust among community members generally and a corresponding increasing cautiousness in the use of such mechanisms. The changes also reflect differences in the response by different age sets within the community.

While strategies for individual household diversification in livelihood may improve security and response to small shocks in the short term, the authors suggest that this may be at the expense of the community’s resilience to larger shocks in the longer term. They state that “Ultimately these findings outline a story of adaptation wherein a traditional system of exchange is, at once, evolving and declining.” [pg. 25].

There is much to recommend this paper for those interested in understanding the complexity of shifts from traditional cultural mechanism for community resilience to a future influenced strongly by a western model of individuality amidst a dramatically challenging environment.

5. Baird, T. D., & Hartter, J. (2017). Livelihood diversification, mobile phones and information diversity in Northern Tanzania. *Land Use Policy*, 67, 460–471.
<https://doi.org/10.1016/j.landusepol.2017.05.031>

This is an interesting and well documented paper that investigates the relationship between cell phone use and the diversification of livelihoods among the Maasai of Simanjiro District of northern Tanzania. Based on the understanding of information as a driver of social and economic strengthening and recognizing the role of both social networks and technology, the authors seek to explore how the Maasai have incorporated cell phones into the diversification of their livelihoods.

The results showed cell phone use had a number of applications to livelihood activities which were important and significant in the success of enterprise including such applications as: reporting of livestock predation; cattle market pricing; weather forecasting; and, money transfers. More indirect uses related to activities such as: attending to health issues and needs; coordinating family activity; and, organizing committee and group meetings.

While cell phone use had significant positive benefits in supporting the communication among individuals and groups, there were also a significant number of negative impacts including the rise of misinformation, distrust and outright theft. In a society where traditional communication patterns and power are structured in hierarchical ways, it is probably not surprising that new communication technologies will instigate challenging changes that will tend to undermine traditional patterns of community engagement and control.

The authors conclude that the most significant impact of mobile phones on livelihood diversification was evident at the highest levels of diversification already. Mobile phones tended to support existing use more than stimulate diversification. Coupled with other forces of change

within Maasai society however, it is reasonable to assume that cell phone use will increasingly become an important factor in the process of change and livelihood diversification.

This is a useful and worthwhile article that gives some interesting perspectives on both technological adaptations in Maasai society as well as the impacts of external forces in changing the traditions and structures of a culture that is under great pressure.

6. Bergius, M., Benjaminsen, T. A., Maganga, F., & Buhaug, H. (2020). Green economy, degradation narratives, and land-use conflicts in Tanzania. *World Development*, 129, 104850. <https://doi.org/10.1016/j.worlddev.2019.104850>

This paper reflects on some broad relationships between traditional pastoralism and government priorities for land development especially as they are influenced by the international investors and the aid community. Priorities of those in power focus on large scale economic development, presumably in the broad interest of the state economically and internationally, at the expense of small scale, traditional, household livelihood endeavours. Through a review of the specific case of the land use conflicts which developed in the Kilombero valley, the paper illustrates “how degradation and scarcity narratives gloss over political and historical factors in land-use conflicts.” [pg. 2]

At the heart of the land use conflict is the eviction of pastoralists in favour of increasing ‘modernization’ of agriculture through large scale investment. The land use conflicts between pastoralism and the Southern Agricultural Growth Corridor of Tanzania (SAGCOT), initiated in 2012 and covering a significant proportion of the most productive agricultural land in the country, are used as the example. SAGCOT is described as: “public–private partnership that seeks to mobilize private investments across the agricultural value-chain and develop commercially successful and sustainable agriculture”. The typical interpretation of the cause of land use conflict, that of resource depletion resulting from population pressure, environmental degradation, unequal access, is argued to largely overlook political and historical factors which systemically dispossess traditional resource users.

The current policy framework of Tanzania is reviewed with respect to agriculture [transforming low production levels to semi industrial modernization] , land regulation [raising productivity on underutilized land], and pastoralism [integrate with large scale operations to move from being ‘stagnant’ and ‘unproductive’]. The specific example of the Kilombero valley and the SAGCOT initiative illustrates the land use conflicts arising from the interaction of this policy framework with the economic and conservation agenda of this rich area of Tanzania.

This is a very worthwhile review of the growing influences of conservation and agribusiness capital investments as the primary drivers and narrative behind the green economy.

7. Bluwstein, J., Moyo, F., & Kicheleri, R. P. (2016). Austere conservation: Understanding conflicts over resource governance in Tanzanian Wildlife Management Areas. *Conservation and Society*, 14(3), 218–231.

This article reviews WMAs from a rules and regulations perspective to understand the degree to which objectives of devolved resource management responsibility are being achieved. Utilizing a framework of political ecology to explore WMA governance, the authors explore the underlying policies in relationship to a single case study – Burunge WMA in northern Tanzania. The historical context as well as the prescribed organizational structure and power sharing nature of the WMAs are clearly driving forces in the way local villagers benefit from and interact with the WMA.

The study concludes that the power and accountability relationships among the actors within the WMA create a situation where local people ultimately feel disempowered and have very little control over their own land and resources.

8. Bobadoye, A. O., Ogara, W. O., Ouma, G. O., & Onono, J. O. (2016). Pastoralist perceptions on climate change and variability in Kajiado in relation to meteorology evidence. *Academic Journal of Interdisciplinary Studies*. <https://doi.org/10.5901/ajis.2016.v5n1p37>

Utilizing the same case study area as Filho et al, 2017, that of Kijaido Country, Kenya, this study assesses the alignment of climate change data with the perceptions of the local Maasai on such changes. Data was compared over a 30 year period. While definitions of drought scientifically and among the Maasai communities may differ, the recorded and perceived incidence of drought conditions were found to be consistent. The authors suggest that such a combination of data sources is valuable to give a deeper understanding of the changes and their impacts on the local communities. The authors also point to insufficient climate data in some key areas such as the number of days of rain which will impact the length of the growing season. Efforts to expand such data is therefore one of the recommendations of the study.

9. Borona, K. (2020). An assessment of Maasai people-water relationships in a changing landscape: A case study of former Kimana Group Ranch in the Amboseli ecosystem, Southern Kenya. *Society & Natural Resources*, 33(10), 1292–1308. <https://doi.org/10.1080/08941920.2020.1744049>

While this study is highly influenced by location, as acknowledged by the author in light of the nature of both the land dedication and the methods used in the study, there are a number of important elements of the discussion that are more widely applicable and valuable in understanding the relationship water has with the Maasai people. Specifically, the author focuses on water as “a sacred artifact, a mediator of social relations, shaper/marker and creator of history and its centrality as a livelihood strategy.”

This research is conducted on the former Kimana Group Ranch in Kajiado County, which from a water perspective is highly influenced by the watershed of nearby Mount Kilimanjaro in Tanzania. Group ranches were a form of land management established in Kenya in the 1960s and due to unfulfilled expectations, many were subdivided, leading to another set of challenges. This historical context is important since water accessibility depends significantly on land tenure systems. What the case study shows is that traditional Maasai management systems have and continue to undergo transformation as a result. Pastoralism in the area has rapidly been replaced by agriculture, predominantly irrigated agriculture utilizing major water sources in the area..

The research utilizes an indigenous research methodology including talking circles, elder interviews and community mapping, with regular member check and onsite triangulation built into the process. The results show a high utilitarian value for water but at the same time a very strong cultural and spiritual connection which have changed over time relative to the physical and social environment.

Details of the research results in each of the four relationship characteristics identified above are presented with strong representations of the voice of the participants. Furthermore, participants views on key issues such as subdivision, the transition to agriculture and the role of water as a influence in livelihood activity and success are also presented. Connections with climate change in each of these areas notably arises from the participants.

The conclusion of the study reflects on the loss of indigenous management systems and the need to restore them. Given the ongoing threat to traditional systems and the co-opting of management by government under systems that are not compatible with traditional values, makes this study a useful example that has relevance to many other situations in East Africa experiencing similar transitions perhaps for their own and different sets of reasons.

10. Burgoyne, C., & Mearns, K. (2017). Managing stakeholder relations, natural resources and tourism: A case study from Oloolosokwan, Tanzania. *Tourism and Hospitality Research*, 17(1), 68–78. <https://doi.org/10.1177/1467358416639088>

This is basically a field trip report. Indeed, the authors identify it as emanating from a five day visit to the community of Oloolosokwan and based on conversations and interviews with a variety of villagers and stakeholders. The intention was to understand the interaction of stakeholders with respect to the use of resources within the community – a major focal point for tourism, hunting and traditional pursuits given Oloolosokwan is a Maasai community located adjacent to Serengeti National Park. As an overview of the Oloolosokwan situation, it is a reasonable first read for anyone interested in pursuing more analytical assessments of the dimensions of the issues in this area. However, there are much more definitive resources on this highly complex subject.

11. Buzinde, C. N., Kalavar, J. M., & Melubo, K. (2014). Tourism and community well-being: The case of the Maasai in Tanzania. *Annals of Tourism Research*, 44, 20–35. <https://doi.org/10.1016/j.annals.2013.08.010>

The foundation for this article is a definition of community well-being that is driven by local understanding and needs of indigenous communities rather than those developed without the engagement of local people. From there the author investigates the influence of tourism on community well-being within Maasai communities in Monduli District of northern Tanzania. Considerable review of the origins and application of the concept of well-being introduce the study along with a review of the linkages to tourism as a development agent.

Focus group discussions in two Maasai communities with significant connections to the tourism industry provide the data collection for the study. Focus groups were established with relevant age and gender considerations appropriate to Maasai communities and the results compared among the groups and between the communities.

The interesting aspect of this article was that in spite of the significant effort to build a “bottom up” approach to defining well-being, the results showed a decidedly economic definition almost exclusively. Virtually no mention, beyond the article’s introduction and literature context, was ever made to health, social and cultural dimensions of well-being. So either the study was unable to build a local dimension to the definition, or the communities themselves do not see well-being as being anything other than economic. Well-being was defined in the focus groups as being influenced by: livestock; children and wives; green pasture (arable) and land resources; money; schooling of children; and, good health and physical fitness. The health and physical fitness attribute was perceived as a means by which one could appreciate the other benefits of well-being.

The relationship to tourism illustrated strong benefits to community members understandably stemming from a long connection to the sector and the location of the communities in a high tourism zone of the country. However, there were also many negative aspects, especially relating to impacts on culture, which only further highlighted the absence of culture from the definition of well-being.

While this is an interesting article that provides a good review of the concepts, the details of the specific data and the outcomes of the research seem unusually disconnected to the stated intentions.

12. Caretta, M. A. (2015). Managing variability and scarcity. An analysis of Engaruka: A Maasai smallholder irrigation farming community. *Agricultural Water Management*, 159, 318–330. <https://doi.org/10.1016/j.agwat.2015.05.015>

Like the Borona (2020) study, this paper describes in-depth research into a specific site that by its environment and history sets it apart from much of the surrounding area and indeed much of the Maasai experience generally. Engaruka, located at the base of the Ngorongoro escarpment, is the site of a previously abandoned irrigation system, operational between the 15th and 19th centuries. This study explores agricultural and water management in light of the combined pressures of

increasing demand on resources and the changing patterns of water supply. In particular, it focuses on the management of the water resource when agricultural demands including crop types, production methods, and water distribution in an environment of water scarcity.

Methodologically, the study incorporates semi-structured interviews and focus groups along with member checking and participatory mapping. As a context for the irrigation focus of the topic, operational rules for managing irrigation systems are also reviewed.

Because water management in Engaruka is controlled by a local committee, considerable attention is given to the structure, functions and authority of the committee. It is also recognized that given the variability of the resource [i.e. both volume and seasonality of rainfall], management systems need to be especially flexible and adaptable.

What seems particularly relevant in setting this case study apart from other reviews of the Maasai relationship to water and its management, is the result that shows agriculture as the most important livelihood activity – more significant than cattle. Within the agricultural focus is also the recent adoption of horticulture and products and markets that are generally not available to other areas within Maasai homelands.

Nevertheless some of the principles that emerge from the results such as the characteristics of successful water management organizations, equity among resource users and mechanisms for adaptability and conflict resolution are useful contributions to their wider application.

13. Dekker, L. A. G., Arts, K., & Turnhout, E. (2020). From rationalities to practices: Understanding unintended consequences of CBNRM. *Conservation and Society*, 18(2), 1–11.
<https://doi.org/10.4103/cs.cs.19.29>

This paper discusses a specific contentious issue which arose in Enduimet WMA and illustrates how the approaches to public engagement on issues of resource use and management can influence the effectiveness of the WMA itself. Furthermore the study stresses the importance of practice in maintaining the principles of participation, legitimacy and social inclusion. In this issue analysis these principles were undermined when promises were broken. While difficult, the authors suggest that effective participation can be achieved when processes are sufficiently sensitive to existing power structures and inequalities.

This is a useful read and provides insights into the nature and challenges of WMA management especially around the development of resource management policies affecting the participating communities.

14. Filho, W., Nzengya, D., Muasya, G., Chemuliti, J., & Kalungu, J. W. (2017). Climate change responses among the Maasai community in Kenya. *Climatic Change*, 145(1–2), 71–83.
<https://doi.org/10.1007/s10584-017-2087-9>

This paper is a case study of the adaptation of livelihoods to climate change from Kajiado County in Kenya, bordering Tanzania. The authors take the view that while climate change impacts need to be acknowledged as significant, they cannot be readily disaggregated from other change inducing influences. These coinciding factors include the privatization of land, expansion of large scale commercial farms (especially involving irrigation for wheat and vegetable production), urbanization, and significant population of the Maasai community.

Results conform to other similar studies indicating a notable impact caused by decreasing rainfall and increasing temperatures leading to changes in traditional livelihood patterns and the loss of traditional culture. More intensive grazing, diminished range quality, smaller herds and storage of water are documented as outcomes of climate stress. Diversification to other livelihood activities such as expanded agriculture, business and paid employment are also noted.

15. Gardner, B. (2017). Elite discourses of conservation in Tanzania. *Social Semiotics*, 27(3), 348–358. <https://doi.org/10.1080/10350330.2017.1301799>

This article is a useful and welcome challenge to some of the generally accepted concepts relating to tourism as a driver of local economies and development. It utilizes the international campaign to 'save the Serengeti' as an example of how elite western principles are used to adjudicate in favour of conservation as a way to justify land dispossession. Through a review of a web based organization called Serengeti Watch founded by two American conservationists, the author explores the current relationship of international agendas regarding a proposed road expansion through the Serengeti on the Maasai whose lands continue to be dramatically reduced through conservation including the original setting aside of the Serengeti in the first place.

This is a thoughtful narrative that is worth reading although like other articles on the subject of this corner of the Serengeti, the complexity of the topic and its very extensive history of conflict requires a much more in-depth review to be well understood.

16. Goldman, M. J., & Riosmena, F. (2013). Adaptive capacity in Tanzanian Maasailand: Changing strategies to cope with drought in fragmented landscapes. *Global Environmental Change*, 23(3), 588–597.

This paper explores the changing nature of institutions within Maasai society and the relationship of such changes to livelihood adaptation in the light of changing climatic and environmental conditions. The authors suggest that entitlements and assets held by households are changing with the external pressures on pastoralist societies, increasing the vulnerabilities of poorer segments of the community. This is a useful perspective to add to other work and case studies of climate change vulnerability and adaptation. It broadens the understanding of the variability of household adaptive capacity.

Using Agrawal's institutions framework and with a focus on mobility within his fivefold typology of coping strategies, the author's investigate pastoralists' response to the drought of 2009, considered to the most severe in recent times. Two Maasai communities in northern Tanzania, one from Monduli District and one from Longido District, are used in the study.

Of particular interest among the conclusions of the study is the impact of the changing social environment which suggests that in the future adaptation to drought will involve less shared pasture resources among the community and increasing individual exclusivity. The impact on vulnerability for the less advantaged in the short term but everyone in the long term is considered very significant.

17. Goldman, M. J., Davis, A., & Little, J. (2016). Controlling land they call their own: Access and women's empowerment in Northern Tanzania. *The Journal of Peasant Studies*, 43(4), 777–797. <https://doi.org/10.1080/03066150.2015.1130701>

This paper addresses and rights as a mechanism for women's empowerment within Maasai communities of northern Tanzania. It compares the approaches of two NGOs, the Maasai Women's Development Organization (MWEDO) and the Ujaama Community Resource Trust (UCRT), both of whom advocate for greater women's empowerment through land rights. It presents a thorough analysis of the issues relating to land and its impacts on women in terms of power, social relations, collective identity and self image.

The authors suggest that a broader focus is required beyond the typical legal entitlement demonstrated by deeds to land – one that includes emphasis on gaining knowledge about legal rights, access to and participation in customary forms of authority, and promotion of a joint social identity that recognized

18. Hedges, S., Borgerhoff Mulder, M., James, S., & Lawson, D. W. (2016). Sending children to school: Rural livelihoods and parental investment in education in northern Tanzania. *Evolution and Human Behavior*, 37(2), 142–151.
<https://doi.org/10.1016/j.evolhumbehav.2015.10.001>

This is a very thorough and useful study of the relationship between education and livelihoods in northern Tanzania. The context within the literature of demographic transitions is very well resented and adds a perspective to the topic generally lacking in other studies. The study identifies three different cultural groups – the Maasai, generally pastoralists; the Arusha, generally agriculturalists, and the Meru, traditionally agriculturalists who were early adopters of cash crops such as coffee and are associated with commercial agriculture and business.

Four predictions are identified as the focus of the study: 1) investment in education will be lowest in Maasai households and highest in business owning households; 2) investment in education will increase with household wealth but to a lesser extent in Maasai households; 3) investment in education will be less for girls and later born children; and, 4) investment in education of girls and later born children will increase with household wealth.

The first two predictions were supported by the results of the study but interestingly, unlike other studies, girls were found to have a greater total number of years of education, largely as a result of greater success in entering secondary school, although girls were noted to be less advantaged in Maasai households than in others. A range of factors, both advantages and challenges relating to this finding are discussed. Mixed results were found relative to the fourth prediction with some evidence of gender and birth order biases, especially in wealthier households.

The study conclusions suggest that pastoralists are less likely to send their children to school and that there is little demonstrated link between wealth, predominantly livestock, and seeking education for their children. Also some evidence shows wealth is a factor in educational investment preferentially by gender and birth order. However, there remains a lack of understanding of the anticipated costs and benefits of education.

19. Huggins, C. (2018). Land-Use Planning, Digital Technologies, and Environmental Conservation in Tanzania. *The Journal of Environment & Development*, 27(2), 210–235.
<https://doi.org/10.1177/1070496518761994>

This paper is not an easy read given its reference to a complexity of influences on the wide variety of factors involved in the Village Land Use Planning process. The somewhat disjointed flow of the paper adds to the challenge. Nevertheless, there are a number of insights that make the article a useful contribution to understanding the land allocation and management processes in Tanzania.

The paper analyzes two specific Village Land Use Planning projects, both in northern Tanzania (Meru District and Mwanza District). The paper highlights the fact that due to lack of funds, insufficient capacity building, and limited political will, it is difficult to ensure that village land use planning is effectively done or that once planned land is effectively and transparently managed. Elected local planning committees have an approval role in the process, however, participants at state and even international levels exert a significant level of influence on the outcomes through the necessary adherence to national policies and the promotion of methodologies and “best practices” adopted elsewhere within the international community. Capacity issues at the local level obviously strengthen the influence of external actors. Indeed, as a result of such issues, one of the case studies illustrates a planning process facilitated by an international NGO.

Given the northern location of these case studies, a common driver for planning is the pressure for environmental conservation often in conjunction with efforts to establish Wildlife Management Areas (WMA), while in other areas of the country the focus may be more on the pressure to expand large scale commercial agriculture such as in the Southern Agricultural Growth Corridor of Tanzania (SAGCOT).

While intended as a participatory process utilizing grassroots consultation and decision-making, the paper concludes that the complexity of the process leads greater influence of higher level stakeholders who can influence the results to support their agenda, often of broader conservation. Process often give the appearance of local support but independent assessments more commonly show them to be window dressing by national and international elites.

20. Kieti, D., Nthiga, R., Plimo, J., Sambajee, P., Ndiuini, A., Kiage, E., Mutinda, P., & Baum, T. (2020). An African dilemma: Pastoralists, conservationists and tourists – reconciling conflicting issues in Kenya. *Development Southern Africa*, 37(5), 758–772. <https://doi.org/10.1080/0376835X.2020.1747988>

This paper reviews the perspectives of the variety of stakeholders engaged in the conservation / tourism / pastoralism relationship. While written from a Kenyan perspective, the relationships described are more generally applicable to the Maasai of both Kenya and Tanzania. The authors explore both the advantages and challenges of fundamental approaches and trends such as CBNRM, land management policy, individualism vs communal management and local vs national and international interests, influence and benefits.

There is considerable good background referenced throughout the paper, however, there does not seem to be a central theme or critical analysis provided in the discussion. As a result, the conclusions seem to be weak and unfocused.

21. Kimaro, E. G., Toribio, J.-A. L. M. L., & Mor, S. M. (2017). Climate change and cattle vector-borne diseases: Use of participatory epidemiology to investigate experiences in pastoral communities in Northern Tanzania. *Preventive Veterinary Medicine*, 147, 79–89. <https://doi.org/10.1016/j.prevetmed.2017.08.010>

Climate changes strongly affect pastoralist livelihoods especially through impacts on livestock. This study looks at the relationship between pastoralists perceptions of climate change and their response to the impacts on their livestock. As part of a larger study investigating disease management in cattle in Monduli District of northern Tanzania, a survey of cattle owners and focus group discussions in 10 villages within the district were used to gather data.

The vast majority of participants, given the criteria of cattle ownership, were males. Their recall of climatic changes [typical conditions of increasing temperature, erratic rainfall patterns, decreased rainfall, etc.] and the specific years of difficult conditions were notable. They also identified local population growth, increased cattle numbers and increased tree cutting as causes of such change. The impacts were significant cattle deaths, decreased market value, increasing incidence of disease, shrinking grazing land through loss of vegetation, increasing soil erosion, decreasing quality of grass and challenges with increased movement of cattle to water supplies. When considering the future of such change, participants tended to be pessimistic and identified increasing recurrence of prolonged drought, increasing conflict with other land users and increasing difficulty of moving livestock as primary concerns.

The study also investigated the means by which Maasai gather information to be able to plan and address the challenges they are facing. It was concluded that since no reliable information or early warning systems were in place that this should be a priority as livestock owners can respond more positively with advance warning.

22. Lwoga, N. B., & Asubisye, E. (2018). Effects of drought on cultural tourism: Selected cases of Maasai tourism groups surrounding Tarangire National Park in Tanzania. *Journal of Tourism and Cultural Change*, 16(3), 248–264. <https://doi.org/10.1080/14766825.2016.1261147>

This paper attempts to explore the relationship between climate change, with a focus on periods of drought, and cultural tourism. Women's groups in villages adjacent to Tarangire national park are used as a case study. While some interesting observations are presented, the data lacks rigor and is not clearly assessed, making it difficult to develop meaningful conclusions. The authors conclude that drought is both a stimulus for engagement in cultural tourism and a problem for successful

returns from the activity. It is a stimulus out of necessity for survival when traditional activities are curtailed by environmental conditions. On the other hand natural resources used to make cultural products for sales to tourists are less plentiful and of poorer quality in periods of drought.

Observations that were perhaps unexpected and might well be of interest for further study and action were related to the impact of the women's activity on family and household responsibilities as well as the behaviour of your drivers who charged a 'stopping fee' as well as demanding a significant percentage of sales from the groups they brought to the women's facility.

In general, this study is weak in its conceptualization and implementation. It is difficult to have confidence in the results although some ideas may be worth pursuing in future studies.

23. Maganga, F., Askew, K., Odgaard, R., & Stein, H. (2016). Dispossession through formalization: Tanzania and the G8 land agenda in Africa. *Asian Journal of African Studies*, 40, 3–49.

This paper reflects on the formalization (issuing of occupancy rights) of land rights in Tanzania, a process that was initiated in 2004 with strong support and incentive from the donor community and G8. The stated justification for the process is the raising of rural incomes and productivity through expanded commercial agriculture, while reducing conflict through the legal protection the land rights of both farmers and pastoralists. Three categories of land exist in Tanzania: general land (urban and investor held land); reserve land (protected areas and conservation); and, village land (rural land managed by the 12,000+ villages). Through the formalization process, the government intends to transfer significant amounts of village land to the general land category. However, such re-allocation to commercial agriculture certainly will result in the dispossession and resettlement of the current occupants.

The authors conducted studies of the impacts of land formalization in 5 regions of Tanzania since 2008. This paper extensively uses the Southern Agricultural Growth Corridor of Tanzania (SAGCOT) initiative (extending through 2 of the 5 regions) as a reference point for Tanzania's policy directions and the extensive involvement of international actors both governments and private sector. The paper maps outlines the background and nature of the issue and highlights the impacts of conflict and dispossession that result from the process. They argue that formalization appears to be a way to justify dispossession of both farmer and pastoralist lands to support SAGCOT.

This is an important and useful paper in gaining an understanding of the issues surrounding land rights in Tanzania. It captures the important policy stances of government which by focusing on national economic growth in line with the international community's agenda, impacts traditional and cultural land practices and livelihoods.

24. Makulilo, A. B. (2019). Reign over me? Social-Economic Autonomy Claims over Land Rights by Tanzania's Maasai. *Journal on Ethnopolitics and Minority Issues in Europe*, 18(2), 24–42.

This is an important contextual paper that provides background on the legal history and policy framework around land rights of the Maasai in Tanzania. In the course of its analysis, it highlights the Loliondo conflict and while the synopsis is helpful there is much written about this topic beyond this article that is more valuable reading. More importantly, this article is critical for its historical perspective and the contradiction between the legal framework and the application of land management in Tanzania currently.

25. Malipula, M., & Theodory, T. F. (2017). Climate change and socio-economic vulnerability among Maasai pastoral communities in northern Tanzania. *Journal of Policy and Leadership*, 5(1), 10.

This paper provides an example of the socio-economic vulnerability of two Maasai communities in Monduli District in northern Tanzania to the impacts of climate change. Using the theoretical model of vulnerability as previously presented by O'Brien et al (2007), the paper describes a range of impacts identified by participants including family separation, discontinued education, withdrawal from community development programs, suspended livelihood activities of women,

diminished grazing land and conflict with non-pastoralists. Of particular interest were impacts relating to impacts on culture caused by diminished incomes including declining traditional ceremonies and marriages which has the impact of weakening family and community ties. Similarly, lack of resources was forcing young men to intermarry outside their community since the dowry of a non-Maasai girl doesn't require as many cows. The impact of diminished livestock had implications for health and food security as well, impacting the level of poverty.

The paper also reported on measures participants identified that could address the issues. The responses were heavily weighted to government and donor support and intervention and these same ideas were repeated in the conclusions and recommendations in the article. While perhaps reflecting a need for assistance among respondents, such ideas do not represent realistic measures in the Tanzania context.

This paper is not concisely and comprehensively presented and tends to extend the conclusions beyond the strength of the data, thereby being moderate value. It does provide an example of a case-based review of climate change impacts among pastoralist communities, although not providing much in the way of innovative ideas or new insights.

26. Massoi, L. W. (2019). Gender roles and practices in natural resource management among the Kilosa Maasai in Tanzania. *Tanzania Journal of Development Studies*, 17(1), 102–116.

This paper describes a case study of gender influences on land ownership and management among Maasai women in Kilosa District of Tanzania. The ability of customary law to override statutory laws with respect to ownership and inheritance places women in Maasai communities at a distinct disadvantage since the traditional patriarchal system does not acknowledge any right of women to land and resources. The paper concludes that 'adaptation' of traditional practices is needed to end the discriminatory practices with regard to land and the negative implications for women and their families.

While the paper outlines the traditional practices thoroughly, there remains considerable repetition in the presentation which makes it a more difficult read. The author's bias is also clearly articulated throughout which detracts from the validity of the work.

27. McCabe, J. T., Leslie, P. W., & DeLuca, L. (2010). Adopting Cultivation to Remain Pastoralists: The Diversification of Maasai Livelihoods in Northern Tanzania. *Human Ecology*, 38(3), 321–334. <https://doi.org/10.1007/s10745-010-9312-8>

This paper takes a 50 year scan of change within Maasai society in Tanzania, especially in the transition from pastoralist to agro-pastoralist characteristics. In particular, the focus is on when, how and why families moved from livestock as the sole livelihood mechanism, in line with the cultural traditions, towards a mixture of livestock and agriculture. The study took place in Loliondo Division in northern Tanzania and involved open ended interviews, group interviews and a survey of heads of households.

The results showed that a two stage process (first a small garden; second a farm plot) was typical. It also showed that the transition peaked during the 1970s and by the 1990s virtually all households were cultivating. The reasons behind the shift are a combination of natural process factors, such as increasing human population, increasing occurrences of drought and the expansion of livestock diseases, and political contextual factors, such as changes in land tenure systems, expansion of parks and protected areas and the expansion of the market economy.

While economic necessity is seen as the prime driver of change, brought about significantly by the combination of increase in household size and the associated decrease in per capita wealth, the authors note that the understanding of motivations for change are much more complex and include a variety of factors not solely economic ones – including changing social and cultural norms.

This is a very useful article that takes a historical perspective on change and clearly articulates the complex influences in an important livelihood shift within Maasai society in Tanzania.

28. Melubo, K., & Lovelock, B. (2019). Living inside a UNESCO World Heritage Site: The perspective of the Maasai community in Tanzania. *Tourism Planning & Development*, 1–20. <https://doi.org/10.1080/21568316.2018.1561505>

This paper investigates the impact of World Heritage status on the resident Maasai of the Ngorongoro Conservation Area (NCA) in northern Tanzania. It presents the results of extended open-ended semi-structured interviews triangulated with an extensive review of relevant documents. Five theme areas developed in the responses: 1. limited access to land resources; 2. impact on livelihoods; 3. participation in decision-making; 4. benefit sharing and threats of relocation; and, 5. conservation and NCA leadership..

In each of these areas, residents of the NCA held predominantly negative views and described a wide array of circumstances and experiences to illustrate those views. It concludes that it is critical to fully involve and respect the rights of indigenous residents within the NCA and that assessments of management performance need to utilize a people-focused framework that can more adequately address the management issues. Furthermore, actions to address negative livelihood impacts such as re-assessing the benefit sharing practices, developing alternative livelihood alternatives and applying resource access policies more flexibly would contribute significantly to improving the situation.

The paper does provide a very useful and comprehensive review of the issues of the Maasai living in the NCA. However, it takes the view that the perceptions and experiences of residents is linked to the status of the NCA as a World Heritage Site. To an extent there is a connection, however, the link between the World Heritage status and the essential management authority of the NCA seems to be misunderstood. Given this very distinct misrepresentation on the part of the authors, it is advisable to review this paper in the context of the management authority itself rather than confuse it with World Heritage status.

29. Moyo, F., Ijumba, J., & Lund, J. F. (2016). Failure by design? Revisiting Tanzania's flagship Wildlife Management Area Burunge. *Conservation and Society*, 14(3), 232. <https://doi.org/10.4103/0972-4923.191160>

This is a critical look at the Burunge WMA as an example of the WMA program in Tanzania which was intended to be and is promoted as community based conservation but which according to the authors is failing and is being misrepresented. The article resulted from basically an ethnographic approach where the authors have engaged in a wide variety of research activities in the area over a number of years. Their collective views on the WMA and its effectiveness therefore come from a interviews, focus group discussions and considerable related research.

The nature of the WMA, its structure and history are reviewed in detail. Furthermore a review of issues that have developed over the life of the WMA, including the rather deplorable state of the WMA financial records, illustrate their perception of “bad to worse”. As a leading revenue generator (second to Ikona WMA), challenges outlined here do not inspire confidence in the system. Rather than being an isolated case, Burunge is seen amidst a broad array of “manipulative, haphazard, and illegitimate WMA implementation processes”. In spite of this, WMAs continue to be represented and celebrated by government, donors, investors and promoters [such as the INGOs] as community based conservation initiatives.

Along with other well researched and documented reviews of the WMA program, this article provides a good insight into the challenges facing WMAs. Perhaps in light of the fundamental rethinking of the WMA model that the authors perceive as necessary, they are not optimistic for such an outcome.

30. Mung'ong'o, H. G., Mbonile, M. J., & Maganga, F. P. (2019). Innovative pathways for enhancing climate change and variability resilience among agro-pastoral communities in semi-arid areas of Kiteto and Kilindi Districts, Tanzania. *African Journal of Environmental Science and Technology*, 13(5), 201–219. <https://doi.org/10.5897/AJEST2019.2650>

This study attempts to investigate the impacts of climate change on households in Kiteto and Kilindi districts and to identify key strategies for improving the resilience of households. A significant amount of rainfall and temperature data and perception data is presented along with documentation of livelihood activities which show a consistency with other studies regarding the impacts of climate change and the responses from pastoralists to such changes, specifically including seasonal migration of livestock, pasture control for dry season use, water storage and herd reduction. The article also introduces the suggestion for use of drought resistant plants for livestock forage as an alternative response mechanism. Since such an approach is not currently used and not known by the vast majority of the participants in the study, it is concluded that integration of scientific knowledge is needed to promote drought resistant crops.

However, the paper suffers from a lack of organization and analysis and many conclusions are reached without adequate linkage of the thinking to the data. Also, contradictions emerge in the interpretation of data and are not acknowledged or explained. As a result, the paper is generally difficult to understand and use.

31. Nderumaki, V., Mkanda, F. X., & Saria, J. (2016). Comparison of food Insecurity among agro-pastoralists and pastoralists communities in pastoral-livelihood zone of Longido District, Tanzania. *Journal of Food Security*, 4(1), 18–26. <https://doi.org/10.12691/jfs-4-1-3>

This study, conducted in Longido District in northern Tanzania, challenges the commonly held belief that pastoralism is an unsustainable system that requires supplementary inputs during times of environmental stress to maintain food security. Using a structured, open ended questionnaire, data were gathered on the main sources of food, their abundance, the severity of food insecurity and the strategies to cope with food insecurity.

Livestock, crops and buying from markets and shops were identified as the primary food sources. Traditional crops were recorded but with low productivity given the environmental conditions of the area rather than any influence of agricultural practices. All communities surveyed indicated food security as a problem but there was no statistical evidence that linked severity with pastoralism rather than agro-pastoralism. Coping strategies to avoid circumstances of food insecurity generally are reported as storing food and buying food.

The study concludes that agriculture is simply an additional activity that does not measurably address food insecurity but rather depletes the quality of pastureland in semi-arid areas. Therefore, it is recommended that proper land use be maintained throughout such fragile ecosystems to ensure the productivity of pastoralism and that where agriculture is preferred as a land use that more appropriate crops that are tolerant to the semi-arid conditions are utilized.

32. Ndesanjo, R. B., Theilade, I., & Nielsen, M. R. (2020). Pathways to enhance climate change resilience among pastoral households in Northern Tanzania. In W. Leal Filho, N. Ogue, D. Ayal, L. Adeleke, & I. da Silva (Eds.), *African Handbook of Climate Change Adaptation* (pp. 1–19). Springer International Publishing. https://doi.org/10.1007/978-3-030-42091-8_128-1

This is a very good review of the relationship between climate change and pastoralism in northern Tanzania that is well documented, analyzed and presented. Using data gathered in Simanjiro District, the study addresses: the climate patterns and trends; the status of household vulnerability to climate change; the adaptation strategies used to mitigate change impacts; and, the role of local institutions in enhancing household resilience.

Based on the Sustainable Livelihoods Framework (Chambers and Conway, 1992), the authors focus on climate shocks as the vulnerability context which affects household livelihoods. Results indicated that seasonally water scarcity and food security are critical issues that will be

exacerbated by increasing droughts brought on by climate change. Primary strategies to address vulnerability were reported to be the maintenance of food reserves and seed banking. When these strategies were stressed, households accessed resources through selling livestock or even liquefying household assets. Traditional leaders and village government were the primary institutions where households sought support in times of stress.

The study concluded that establishing a mechanism for local climate monitoring and reporting would benefit local people in planning their livelihood activities. Furthermore, the authors suggested a move towards livelihood diversification in the medium to long term rather than the current government policy aimed at eradicating pastoralism.

33. Nkedianye, D. K., Ogotu, J. O., Said, M. Y., Kifugo, S. C., de Leeuw, J., Van Gardingen, P., & Reid, R. S. (2020). Comparative social demography, livelihood diversification and land tenure among the Maasai of Kenya and Tanzania. *Pastoralism*, 10(1).
<https://doi.org/10.1186/s13570-020-00165-2>

This article reports on a study conducted in Maasai village areas in both Tanzania and Kenya and offers a comparison of changes, affected primarily through shifts in land tenure systems, in social demography and livelihood diversification. The study areas show variation according to proximity to urban areas along with agro-climatic potential.

The data gathered is extensive, well organized and thoroughly described. Variations are significant across the four study sites [3 in Kenya and 1 in Tanzania]. Social demographic data highlight the differences in age of the household heads, the variation in polygamy according to age, the number of children per family, the education levels of the household head and the number of hired herders per household. Livelihood data document frequency of activity areas such as agriculture, business, and mining and in particular the extent of cultivation and perceptions of its future success. Data on land tenure systems and settlement structure show increasing privatization and a corresponding decrease in communal lands within settlements of the study area. The discussion of these results is thorough and well related to the existing literature.

The comparative nature of the study shows a distinct transition of change relating to the opportunities and pressures inherent in the peri-urban environment of one of the study areas when compared to the remaining sites. The cultural change is linked to the need for diversification of livelihoods due to environmental constraints and change, increasing population, and external pressures on land use. Comparisons of land tenure systems across the two countries is difficult since significantly different contexts exist, however, it is clear that there is an increasing movement to privatization vs collective communal ownership. The authors suggest that such comparative studies are rare and need to be both expanded and extended to include long term monitoring of change which could then be helpful in characterizing the consequences of change both among the Maasai and potentially with extension to other pastoralist groups.

34. Nkedianye, D. K., Ogotu, J. O., Said, M. Y., Kifugo, S., de Leeuw, J., Van Gardingen, P., & Reid, R. S. (2019). Livestock-wealth inequalities and uptake of crop cultivation among the Maasai of Kenya and Tanzania. *World Development Perspectives*, 14, 100106.
<https://doi.org/10.1016/j.wdp.2019.02.017>

This paper investigates the implications of the disparities in livestock wealth among Maasai in communities in both Kenya and Tanzania. Specifically, the objectives of the study are focused on determining livestock wealth inequalities, the influence of that inequality on adopting cropping as a livelihood activity, and the extent to which those inequalities are related to age or gender. Household surveys were conducted in four sites selected for study – 3 in Kenya and 1 in Tanzania. Using a standard livestock unit and applying a threshold level for sustaining traditional pastoralism, the authors applied a Gini coefficient to assess household livestock assets.

Some significant results are reported. Asset inequality was described as moderate to high with the Tanzanian site which demonstrated the greatest variation with more than two thirds of those surveyed falling below the threshold level for sustainable pastoralism. Although weaker, the

results also showed that those with more livestock were more likely to cultivate – an unexpected result. Results regarding herd size relative to age and gender varied across the study sites although older household heads had larger herds per capita.

Gini coefficients recorded here were consistent with results in other pastoralist communities in Africa indicating wealth distribution of livestock is commonly unequal. However, detailed results varied between Kenya and Tanzania, indicating that influences of access to alternative livelihood activities [e.g. off land employment, tourism, large scale crop cultivation]. Notably however, the inequality levels in this study are acknowledged as being some of the highest in the world for pastoralist societies, which can be seen as inconsistent with the characteristic of communal ownership of land generally attributed to the Maasai. However, changes in livelihood options, land tenure and climatic all produce pressures in which the rich will continue to increase in wealth at the expense of the poor exacerbating the inequality rather than lessen it.

The analysis in this study is very valuable in identifying key factors influencing the transition in pastoralist society. It importantly sheds light on issues of poverty and vulnerability and the relationship of the cultural context available to households to sustain themselves into a future of increasing change economically and climatically.

35. Nnko, H. J., Gwakisa, P. S., Ngonyoka, A., & Estes, A. (2021). Climate change and variability perceptions and adaptations of pastoralists' communities in the Maasai Steppe, Tanzania. *Journal of Arid Environments*, 185, 104337. <https://doi.org/10.1016/j.jaridenv.2020.104337>

This study presents the results of a combined quantitative and qualitative approach to documenting the perceptions of the ways in which climate change affects Maasai communities and the adaptations used to address such changes. The study area includes four villages in northern Tanzania (1 in Monduli District and 3 in Simanjiro District). It serves as a basic contribution to the Tanzanian context of climate change impacts.

Predictably increasing temperatures, increased incidents of drought, insufficient rainfall and increasing variability of rainfall were the characteristics of climate change reported, however, since climatological data was not available, these perceptions were not able to be correlated with recorded data. Similarly, the impacts of such change were perceived to be driven by declining pasture quality and availability including the decline in livestock productivity, decreased livestock survival, increased emergence of livestock diseases, and increased inter and intra-community conflict.

Adaptation strategies that were discussed included moving to seasonal grazing areas, setting aside certain pastures for dry season use, sharing resources among families and transitioning to a more non-traditional diet. Non-climatic changes such as land controls were also acknowledged as influences that exacerbated those brought about by climate change.

The general conclusion was that such changes have a significant impact on pastoralist well-being – from a health perspective, economically and culturally. Furthermore, the authors conclude that expanding to diverse income sources both contributes to the change and at the same time provides greater opportunity for adaptation.

36. Pesambili, J. C. (2020). Exploring the responses to and perspectives on formal education among the Maasai pastoralists in Monduli, Tanzania. *International Journal of Educational Development*, 78, 102267. <https://doi.org/10.1016/j.ijedudev.2020.102267>

It is useful to compare this study with that of Raymond [2021]. Also conducted in Monduli District on a limited sample of two villages, this study seeks to understand the views of Maasai communities on formal education. Unlike the Raymond study, the results here are presented as a balance among three different perspectives on supporting their children in formal education where: 1) people are negative towards such support; 2) people are positive about such support; and, 3) the response is mixed or complementary.

Negative attitudes reflect a concern for the influence that draws children away from their culture and identity as Maasai – intellectually, emotionally and physically. There is a strong sense that those taking up formal education leave the community and are reluctant to return and take up the traditions of their culture. Positive attitudes reflect a sense that formal education offers opportunities in terms of employment, advancement and engagement with the larger society that will benefit both the individual and the society. Literacy and numerical literacy are seen as desirable skills for both outside engagement as well as benefits to family and the business activities that might improve and diversify livelihoods activities. The mixed or complementary response sees both the negative and positive outcomes but believes that both can be achieved together – engaging with broader society while maintaining their culture identity and links with the community.

The study concludes with an interesting recognition that perhaps regardless of the hopes and expectations for the outcomes of formal education that perhaps such hopes may not be realized given the current economic and labour conditions in Tanzania.

37. Rabinovich, A., Heath, S. C., Zhischenko, V., Mkilema, F., Patrick, A., Nasser, M., Wynants, M., Blake, W. H., Mtei, K., Munishi, L., & Ndakidemi, P. (2020). Protecting the commons: Predictors of willingness to mitigate communal land degradation among Maasai pastoralists. *Journal of Environmental Psychology*, 72, 101504. <https://doi.org/10.1016/j.jenvp.2020.101504>

In this article land degradation is used as an example while the focus is methodological – seeking to identify the factors which influence the willingness to protect communally shared resources. The authors suggest that while previous work focuses more on individual level predictors, attention to group level processes might be helpful to the issues facing the Maasai of northern Tanzania. Building on the Social Identity Model of Pro-Environmental Action (Fritzsche et al, 2018) and its underlying theories, they apply the process to the concern for protection of communal lands from soil erosion.

By testing the model through this example, the authors conclude that paying attention to group decision-making processes is helpful when trying to develop interventions for common property issues. However, some areas of results which were not as consistent with previous work in areas such as the role of trust and gender differences, suggested that the cultural context may be important since compared to western culture the Maasai place a stronger emphasis on conformity within the collective. Similarly, gender differences and the lesser extent to which women can take action on livestock issues, may explain some of the weaker associations found within the case study data.

38. Raymond, A. (2021). Girls' participation in formal education: A case of Maasai pastoralists in Tanzania. *Educational Research for Policy and Practice*, 20(2), 165–185. <https://doi.org/10.1007/s10671-020-09273-7>

This study is a case study conducted in a single Maasai village in Monduli District in Tanzania with a limited number of purposefully and opportunistically selected participants. The purpose of the study was to determine the attitudes towards girls' education among various community members, the values girls themselves attached to participation in formal education and the challenges they face in pursuing it.

Surprisingly, the results reported are distinctly negative, that is fathers very much against education of girl children and using their position of power in society to restrict participation. NGO efforts to improve awareness of the value of girls' education and the momentum of such awareness especially among the women is seen as valuable in making change.

It is worth considering this study in conjunction with Pesambili (2020) which was a similar case study also conducted in Monduli District.

39. Ripkey, C., Little, P. D., Dominguez-Salas, P., Kinabo, J., Mwanri, A., & Girard, A. W. (2021). Increased climate variability and sedentarization in Tanzania: Health and nutrition implications on pastoral communities of Mvomero and Handeni districts, Tanzania. *Global Food Security*, 29, 100516. <https://doi.org/10.1016/j.gfs.2021.100516>

This study explores how climate variability and the increasing permanence of settlement among the Maasai of Mvomero and Handeni districts, combine to influence livelihood and subsequently food supply. The focus appears to be on explaining the drivers of decisions on diet. The combined description of results along with the discussion of those result, tends to obscure the actual data gathered in the study and the organization tends to result in repetition and rather than clarity of the work itself.

Nevertheless, support for some well-established causes for livelihood change (e.g. increased frequency of droughts and decreasing predictability of rainfall) affected health status and dietary outcomes. Associated factors, such as reduction in land availability especially through increases in large scale farming initiatives, were also noted. The combination of factors results in higher densities of cattle on poorer pastures, resulting in reduced economic value of the cattle as well as their quality for food production, with the corresponding impacts on human health

Coping strategies that are described include: livelihood shifts, especially crop cultivation and wage employment; changes in household roles, with more women engaging in business and, from the perspective of the men, at the expense of the family at home; and changes in food sources, especially the shift from animal-based products to what is available in the local markets. The impacts of such changes were then further discussed.

The article concludes with some recommendations, specifically for a policy environment that supports continued nomadic pastoralism through access to communal pasture lands and for further research especially longitudinal research that also includes gender differences.

40. Salerno, J., Borgerhoff Mulder, M., Grote, M. N., Ghiselli, M., & Packer, C. (2016). Household livelihoods and conflict with wildlife in community-based conservation areas across northern Tanzania. *Oryx*, 50(04), 702–712. <https://doi.org/10.1017/S0030605315000393>

This paper addresses the important relationship between Tanzania's Wildlife Management Areas (WMA) management and food security. Using an extensive survey across the prominent northern protected areas complex stretching from Lake Victoria to Mount Kilimanjaro, villages associated with WMAs as well as a control group were investigated. Leaders of selected villages were also interviewed to document an institutional assessment. The statistical models were based on the measurement of well-being in terms of food security. Predictors relating to human-wildlife conflict and livelihood assets were also added to the model.

In large measure the results seem to be inconclusive. Although households participating in WMAs in general are more food insecure the variability from area to area is considerable. Furthermore, assessment of the impact of loss of livestock through predation was found to be more extensive within WMA villages, although the impact appeared to be mitigated more effectively even though the specific means of mitigation could not be identified. With regard to productive livelihood assets, fewer sheep, goats and poultry and less cultivated land consistently resulted in greater food insecurity while fewer cattle did not. This was true regardless of the location of the village either within the WMA or in the control group.

The paper seems to have focused most specifically on human-wildlife conflict as an influence in food insecurity. Given the inconclusive nature of the results it might be suggested that such a specific focus may not be the most helpful in determining food insecurity comparisons among villages. There is also a very basic assumption of WMAs being community based conservation that may also not be helpful. The authors generally discount single site studies as not providing significant breadth of data to be of policy value although their own study touches on only four of the 17 gazetted sites. Similarly, their perspective on WMAs seems to be guided by a single assessment while the variety of analyses conducted on WMAs throughout Tanzania is extensive

and covers a host of characteristics [such as land equity, financial management and donor engagement] not drawn out in this study that could be useful in addressing the food insecurity issue.

41. Saruni, K. (2016). Indigenous institutions and rangeland sustainability in northern Tanzania. *Tanzanian Journal of Population Studies and Development*, 23(1 & 2), 1–31.

Using a political ecology approach, this study provides a valuable insight into the relationship between indigenous knowledge and rangeland management among the Maasai of the Ngorongoro Conservation Area (NCA). It is a well documented and important work for people attempting to understand the sources and implications of change in indigenous societies, especially the Maasai of Tanzania. The author begins by referencing the literature on and defining the crucial terms of indigenous knowledge and rangeland management. He then illustrates how indigenous knowledge is used in the governance of rangeland resources.

While the study is site specific to the Maasai resident in the NCA in terms of its data, the work has relevance well beyond the immediate area. In the discussion of what is perceived as a very strong indigenous knowledge base, there is recognition of the weakening use of this important cultural element “due to pressure imposed by political and ecological dynamics into indigenous lifestyles” (pg. 18). The author describes the implications for management of the pressures on the Maasai community brought about by local administrative decisions as well as the larger more broadly based pressures in society and suggests that measures to formalize such a knowledge system might benefit its sustainability as a crucial element of Maasai culture and resource management.

42. Selemani, I. S. (2014). Communal rangelands management and challenges underpinning pastoral mobility in Tanzania: A review. *Livestock Research for Rural Development*, 26(5), 11.

This review of pastoralist mobility is a useful discussion that can most productively be assessed together with Saruni (2016). While acknowledging and describing the traditional approaches to rangeland management at least in part, the author puts these in the context of the historical context of rangeland management policy and experience as led by the central government. Influences such as large scale agricultural development with their incumbent pastoralist evictions, the influx of immigrants from other areas for employment and settlement, the generally accepted view of pastoralism as unproductive and ecologically damaging, and the villagization policies of the 1970s, all illustrate the challenges in modern day management given the impacts of such large scale change. Specific illustrations of district conflicts are also used to illustrate the impacts.

43. Selemani, I. S. (2020). Indigenous knowledge and rangelands’ biodiversity conservation in Tanzania: Success and failure. *Biodiversity and Conservation*, 29(14), 3863–3876. <https://doi.org/10.1007/s10531-020-02060-z>

This is a difficult read. Intended to be a review of the application of indigenous knowledge in rangeland management and biodiversity conservation in Tanzania, it tends to wander significantly and in a poorly organized way through a number of aspects of the issue albeit with a rather dated view of insufficient depth. However, in the discussion there are useful ideas and information that warrant reflection, including for example, enclosure practices and *ngitili* (reserving forage resources for dry season use).

The discussion of challenges which limit the integration of indigenous knowledge in rangeland management also highlights some important ideas: the erosion of indigenous knowledge especially among young people becoming increasingly disconnected to their home communities and being influenced by western culture in lifestyle and education; land use conflicts developing from poverty and the overutilization of resources; and, the impact of COVID-19 generating a local demand for medicinal plants.

Of limited value, this article does present some ideas of relevance which are significant to the topic.

44. Smith, N. M. (2015). Gender and livelihood diversification: Maasai women's market activities in northern Tanzania. *The Journal of Development Studies*, 51(3), 305–318.

While empowering women to undertake diversified economic activities can generate new personal sources of income it can also challenge the cultural norms of a male dominated society. This paper examines two income earning activities undertaken by women in Simanjiro District of northern Tanzania. The article initially reviews the traditional norms of gender and relationships within Maasai society, reflecting on the increasingly flexibility and other factors relating to access to productive resources such as marriage, age-sets influences. The historical complementary roles of men and women strengthened the household unit. However, with colonial economic transformations and the increasing importance of money, which inevitably was controlled by the man, reduced women's autonomy and their engagement with household decision making. Current changes, especially with young men leaving for employment and children attending school, are causing new shifts in household responsibilities and roles in livelihood activities.

Through interviews with women in three villages across the District, the author considered local market activities as a primary source of personal income for women. The very qualitative approach of the article provides insights and narratives that are very personal with individual interviewees' comments referenced extensively. General conclusions from the conversations indicate that while gaining access to their own cash, making a contribution to the household and achieving a certain degree of independence are all benefits of engaging in personal economic endeavors, the resulting challenging of gender norms usually comes with a cost to those engaged in the change.

The author also delves into women's work in Mererani, a gemstone area with a 'gold rush' mentality and social structure with its prevailing high rates of crime and violence. A few isolated participants provide the insights to the work in this area however, the transferability of such understandings to Maasai women generally and their economic aspirations and implications for their household, is exceedingly questionable.

This article provides interesting firsthand, descriptive accounts and raises some interesting questions regarding the complexity of changing gender norms within Maasai society. It does not however, provide significant conclusions.

45. Sulle, E., & Banka, H. (2017). Tourism taxation, politics and territorialisation in Tanzania's wildlife management. *Conservation and Society*, 15(4), 465–473. https://doi.org/10.4103/cs.cs_15_28

This paper takes a very specific investigative look at the tax and revenue sharing model within Tanzania's WMAs. Revenue stems from tourism concession fees paid by investors on a contractual basis for facilities and services offered within the WMA. However, all revenue is paid to the Wildlife Division of the central government and then redistributed according to a revenue sharing formula to WMA management and local villages.

Using two case studies, Burunge and Randilen, the authors illustrate the problems in the financial structure that create inequities, lowering of revenue expectations and resistance by villages to be involved in the WMA at all. The result is even where revenues are significant, such as in the northern regions and major tourism circuit, the benefits are not reaching the people of the local villages. Furthermore, in many situations the revenue generation potential from tourism does not compare to the revenue potential from other land use activities such as agriculture.

The paper concludes that without a much greater effort to devolve power, authority and management to a local level [the hallmark of success in other community based conservation initiatives in Africa], villages will continue to resist participation in what appears to be an effort by government to continue to expand their control over revenue from tourism initiatives on village land.

46. Wangui, E. E., & Smucker, T. A. (2018). Gendered opportunities and constraints to scaling up: A case study of spontaneous adaptation in a pastoralist community in Mwanga District, Tanzania. *Climate and Development*, 10(4), 369–376.
<https://doi.org/10.1080/17565529.2017.1301867>

This paper presents the results of a case study in Kilimanjaro region of Tanzania that identifies strategies for adaptation to climate change within a pastoralist community along with an assessment of effectiveness and of the factors that are important for scaling up such actions. Data in the study was gathered at the community, household and individual level through workshop discussions and key informant interviews. Gender and wealth influences were investigated specifically with respect to the types of adaptations that were perceived to be most successful and for their ability to be scaled up.

Familiarity with the adaptations was found to be crucial for their success and the potential for scaling up. However, financial constraints proved to be significant relating to virtually all adaptations with respect for their initial implementation and their future potential. As a result the implications for women in particular are significant since access to land and other financial sources are typically controlled through their husbands. A more recent adaptations, especially related to education and support from family beyond the community, is a factor in the analysis which has increasingly widespread importance.

This is a useful and well presented study and although very site specific does identify concepts that can be useful in other comparable locations.

47. Wijngaarden, V. (2021). Maasai perspectives on modernity: Narratives of evolution, nature and culture. *Critical African Studies*, 13(2), 197–215.
<https://doi.org/10.1080/21681392.2020.1850303>

Using the narrative theory approach, Wijngaarden first explores the concept of modernity and the narrative of evolutionist modernity. This now considered problematic thinking builds a separation between culture and nature and pre-modern and modern which identifies one as more advanced and thus places superiority in the hands of some at the expense of others. Emerging from this basic understanding of modernity, the key dichotomies of nature / culture and culture / Culture are then discussed using Maasai understandings. Given the centrality of the nature / culture relationship as it has been viewed and is increasingly under a spotlight in today's society, this discussion warrants careful reflection especially from the perspective of indigenous cultures. The culture / Culture dichotomy is described as the difference between pre-moderns, characterized by a nature / culture continuum, and moderns, separated from nature and thus living in a higher form of civilization.

A greater understanding of these dichotomies and their implications provides a very useful discussion of the interaction of these narratives and of Maasai culture today. The analysis presented in the paper supports an understanding of culture and modernity that embraces “a less Eurocentric approach, which acknowledges that people from all backgrounds continually and actively (re)construct narratives, and that they do so in co-creative interaction with each other.” (pg. 208). The author uses this discussion to suggest that current renewed interest in a nature / culture continuum should be utilized to include Southern (and indigenous) experiences and perspectives that will contribute to a more global knowledge system.

48. Woodhouse, E., & McCabe, J. T. (2018). Well-being and conservation: Diversity and change in visions of a good life among the Maasai of northern Tanzania. *Ecology and Society*, 23(1).
<https://doi.org/10.5751/ES-09986-230143>

The conservation agenda for Tarangire National Park and the surrounding area has had a significant impact on local communities. In an attempt to identify more socially just mechanisms for conservation, this study uses a well-being framework that blends three aspects: materials well-being; the subjective assessment of one's own life processes; and, the roles of relationships with others in addressing needs and achieving goals. Although the researchers have long term engagement in the area, this specific study was conducted through 26 semi-structured group

interviews in four villages of Simanjiro District during 2014. Men and women were interviewed separately with efforts to represent different age-sets, households and wealth status within the villages.

Generally there were considerable similarities between men and women regarding their views on well-being, especially with respect to material aspects as livestock, land, children and food security. Variations were evident among men of different age groups, especially in relationship to cultural change and the value of education, money and being part of a diversified economy. Women focused much more on the relational aspects of well-being than men. The importance of good marriage relationships and among the wives of the husband, gaining independence and some measure of economic autonomy, health concerns for family, and ready access to water resources, all were seen as significant. Women unanimously saw some changes in cultural traditions as positive, especially around education, female circumcision and early marriage.

Although the prime significance of the study seemed to lie in the assessment of well-being, the authors were focused on the implications for conservation strategies for the long term. The approach used in the study was considered valuable due its holistic and very locally grounded nature. What distinguished both the approach and the results from the study was the understanding of future perceived well-being which can be strengthened by maintaining social capital and reducing the impact of trends towards individualization. The overriding conclusion with respect to conservation seemed to be: “*if material needs are met, attempts to impose conservation policy from the top down without addressing security concerns, allowing local autonomy, and building trust, will undoubtedly be resisted especially in the context of deep-rooted historical injustices and continuing threats to land.*”

49. Yanda, P. Z., & William, C. (2010). Livelihoods diversifications and implications on food security and poverty levels in the Maasai plains: The case of Simanjiro district, Northern Tanzania. *African Journal of Environmental Science and Technology*, 4(3), 154–166. <https://doi.org/10.5897/AJEST09.177>

This paper investigates livelihood strategies in Maasai communities in northern Tanzania, specifically in three villages in Simanjiro District of northern Tanzania. The authors are particularly interested in how poverty is perceived in the communities and the influence of livelihood strategies on moving households from one wealth category to another.

The findings indicated a strong perception of wealth related to the cultural dominance of pastoralism – cattle numbers – although ownership of land, number of wives and children, the possession of other assets (e.g. motor vehicle, motorbike) and participation in business also affected the classification. Not surprisingly, the emphasis on cattle numbers as a wealth indicator resulted in the majority of study participants acknowledging that livestock numbers increased over time in response to natural increase but also in large measure because earnings from any livelihood activity typically are used to buy more livestock. The authors point out however, that while diversification are a benefit to some, the majority of people in the communities surveyed are “still poor and becoming poorer” (pg. 165).

A series of recommendations stem from the research although it is not entirely clear from the data where some of the recommendations originate. Improvements suggested include initiating small scale credit schemes, improving access to land, improving infrastructure (e.g. road networks) and marketing opportunities, increasing water access, emphasizing goat production and improving veterinary services. However, an overarching concern is that when attempting to blend traditional pastoralism with a monetary economy there will always be challenges due the nature of pastoralism as a ‘slow response system’.

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This article is an extremely useful discussion of the structure and dynamics of Maasai families with an emphasis on the access to resources by women related to their roles in cattle management.

Based on an in-depth mixed method gendered approach conducted in Narok District in southern Kenya, the study explores resource access within the household, specifically livestock and the milk they produce. The author describes the system of cattle management – its ownership, growth and maintenance and the different roles and responsibilities of family members. While the boma cattle resources are collective for grazing purposes, the herds are divided according to individual households of the wives in the boma for milking and maintenance purposes. While providing autonomy for women and access to a critical food resource, the division is not necessarily equitable.

The example in the study presents not only important aspects of intra-household dynamics and their influence on resource access and subsequently the food security well-being of Maasai households but it also illustrates the complexity of structuring and interpreting research data in a pastoralist and polygamous society. It is valuable too as an insight into the gender roles in management of cattle management as a key aspect of Maasai livelihood. It is well worth careful review of the concepts presented.

7. Further Reading

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