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RESOURCE STRUGGLE, RESULTANT REALITIES AND THE FUTURE OF MARAGOLI LAND USE

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Abstract

Land has remained one of the most basic and valuable economic resource right from the precolonial to the post independent Kenyan society. The success or failure of every society is always pegged on how prudent the society manages the resources within its reach in the midst of changes, challenges and opportunities that time and space avails every single moment. Being part of the Kenyan society, the Maragoli community has never been left out of the land question that has troubled Kenya over time. The pre-colonial Maragoli society had a land tenure system which was characterized by communal control of land together with its resources and practiced individual land ownership. Though land was communally owned at the general level, it was individually owned and tilled at the family level. The basis of land administration was the customary law executed by the elders who had the overall powers over the production resource. Through colonial policies such as alienation of the Africans' land, confiscation of livestock, introduction of taxes and the cash economy; all these mechanisms brought about disequilibrium in the Maragoli precolonial land use. With this in mind therefore, this paper examined the nature and realities in resource struggle and the future of such struggles especially in regard to land use in the postindependence Kenya, using the case of the Maragoli. Through the articulation theory, this paper demonstrates that the interaction between the pre-colonial Maragoli land use practices and the colonial land policies greatly impacted on the Maragoli socio-economic and political structures. Due to the cash crop economy, the traditional Maragoli communal attitudes towards land as a resource are fading out resulting into individual emphasis on land use. This individual emphasis on land use is the major cause of uneconomical subdivision of land, insecurity and increased poverty. It is from the above perspective that the paper analyses the post-independence Maragoli land situation, some of the key causes of uneconomical subdivision of land and the possible solutions.

Key words: *Land use patterns, land use systems, land tenure system.*

Introduction

The pre-colonial Maragoli society had a land tenure system characterized by communal control of land together with its resources and practiced individual land ownership. Though land was communally owned at the general level, it was individually tilled at the family level. The basis of land administration was the customary law executed by the elders who had the overall powers over land as a production resource.

Colonialism was the main agent of change to the pre-colonial Maragoli land use. Through colonial policies such as alienation of Africans' land, confiscation of livestock, introduction of taxes and improvement of marketing facilities for settlers, introduction of the cash economy and the cash crop farming. All these mechanism brought about disequilibrium in the Maragoli pre- colonial land use. Communal land use was for example abolished and the place of Maragoli elders as the custodians and authority on land issues came to an end. In place of the elders, colonial administrators such as chiefs and village elders were empowered to arbitrate on land issues. This was part of the colonial mechanism of articulating and reorienting the Maragoli land use for the colonial state's convenience. The establishment of colonial rule led to the emergence of new changes towards commodity production and the provision of wage labour.

Land a crucial resource in the production and exchange economy of the Maragoli, was individualized in terms of registering parcels and giving the owners almost uncontested usufructuary rights and alienation powers. The 1954 Swynnerton plan which has been termed as one of the greatest colonial land policy document modeled along the 1925 English land policy had an indispensable role in orienting the Maragoli land policies to fit in the colonial spectrum. Apart from the Swynnerton Plan, other colonial government land policies which impacted on Maragoli land use included the ALDEV and the Million-acre settlement scheme.

Statement of the problem

There is clear evidence that within the context of land use patterns, the strategies of agricultural intensification and coping mechanisms have rarely been studied. In spite of the attention that issues of land receive, there is marginal empirical knowledge about activities of land use patterns anywhere in the world, Kenya included. Information on land use have been documented by Mise (2017) in Vihiga County through the economic planning perspective using the Malthusian theory. However, the present study adopts a historical method to analyze patterns of land use among the Maragoli of Sabatia Constituency in the Western part of Kenya in order to fill the existing knowledge gap.

Sabatia constituency is the most densely populated of the five constituencies in Vihiga County with an ever increasing pressure on land. The region has for example a land holding capacity of 0.4 ha per household. This has led to uneconomical subdivision of land leading to poverty, poor land use, food insecurity and frequent land disputes. Unemployment was also seen to be on the rise leading to general lawlessness among the youth and a high dependency ratio. The proportion of parcels whose owners have title deeds was found to be 28.3 % while the rest was still under the ownership of grandparents. Women ownership of land titles was found to be low due to cultural barriers. This made it very difficult for those who would like to access credit from financial institutions for investment due to lack of collateral. Most people were left to invest their little funds that could not meet their development aspirations. This was even made worse by the high poverty situation. Most people in the constituency owned land. However, 3% of the total population was found to be landless. Some of the landless had invaded the nearby forests for settlement. This had led to negative impact on the environment, climate and food security in the constituency. The remaining landless people have immigrated to neighbouring Counties like Siaya, Kakamega, Nandi, Trans-nzoia and Bungoma. Despite evidence of various studies conducted in Vihiga

County, there is little information recorded that directly dealt with patterns of land use. Consequently, this study utilized the historical method to analyze land use patterns in the area.

Objective

The main objective of this paper was to analyze the current policy issues that have affected the Maragoli land use in the post-independence era.

Research methodology.

The main instrument that was adopted in this research was the administration of interview scheduled and questions among the informants. Oral interviews (abbreviated as O.I) which were done through guide sheets were preferred because they kept the researchers within the objectives of the research. This is because these questions were expressly developed to realize the research objectives. The researchers went with the question guides to the respondents where the questions were paused and re-adjusted where possible to get the intended information. Those who were unable to answer in English were guided through the questions in their vernacular language while the researcher took notes from their response. The researchers also had interview schedules with the County officials and notes were taken from their responses. In order to ease the research process, the research identified seven research assistants and oriented them adequately to ensure maximum utilization of the limited time. These research assistants were University students from Moi, Kenyatta and Masinde Muliro Universities during their long holidays. The study used Focused Group Discussions (FGD) with the informants during data collection.

The study brought together selected informants into one area and subjected them to questioning in order to listen to their responses and how they reacted to each other's contributions. The study held three FGDs; the first at Sabatia (Avugwi hall) on 10th August 2015, the second on 15th December 2015 at Kivagala and the third on 3rd January 2016 at Mambai. The information obtained from the respondents was compared with other sources especially archival and secondary sources to reduce biasness.

This particular research analysed its data by establishing the corroborative extent of the information from all the sources used. The oral data was carefully cross referenced with archival and secondary sources. All this information was sifted, sieved and analysed against the study objectives. This was in order to establish a historical perspective by showing causation and effect in the evolution of the Maragoli land use through time and space. This process helped the research develop themes and trends from the data collected. Once the study established the trends and patterns in the Maragoli land use, a sequence of events in regard to the Maragoli land use was developed and discussed in sub headings.

The post-independence Maragoli land use

It is the position of this paper that the post-independence Maragoli land use patterns are a result of the colonial and pre-colonial interactions. During the post-independence era, the Maragoli society was found to be characterized by cash crop and subsistence farming. However, due to the cash economy, the traditional Maragoli communal attitudes towards land as a resource are fading out resulting into individual emphasis on land use. This individual emphasis on land use is the major

cause for uneconomical subdivision of land, insecurity and increased poverty. It is from the above perspective that the paper analyses the post-independence Maragoli land situation, some of the key causes of uneconomical subdivision of land and the possible solutions.

Most of the poverty reduction strategies in Maragoli land more so the Sabatia constituency-the research area; were geared towards increasing industrial activities through the *Jua kali* sector, brick making and the exploitation of minerals such as gold. All these activities led to negative impact on the environment. Brick making and mineral exploitation led to many open pits in many places within the constituency and increased accident occurrence (CBS 2000). Miore (1993: 389) argues that the state of coping with famine is internally differentiated and is itself a site of struggle over resources, land and power among various actors. Insight can therefore be gained by looking at resource struggles including those between local farmers and the state. This can be within the historical, political, economic and cultural impact on the local women's and men's decision making in terms of natural resource management and other priorities that demand their limited time, energy and resources. With about 1100 people per square kilometer and a land holding of 0.2 hectares per household, Sabatia has had one of the highest rural population densities in the world (Vihiga District Annual Report, 1994).

The historical reality of post-independence Maragoli does not only fit in a one sided and exclusive discussion of modes of production and class relations without relating them to the interaction between stated demography and their natural environmental conditions. It was this kind of relationship that made this study appreciate how the Maragoli harnessed the resources of the environment and responded to the challenges and opportunities rendered by it. The environment therefore was understandably the inescapable resource against which material productive forces were pitted and its importance was not left out of the locus of historical materialism. Marxist political economy as an approach within historical materialism differs from classical political economy in that it seeks to understand the processes of production and reproduction not only in the sphere of the production of commodities but in the totality of the labour processes, the production of life of consciousness, of ideas of religion, politics, the state and the material conditions of society (Aseka 1989b:111).

We must recognize that ecology as a factor is primal in all forms of human development as it largely determines the means of production, mode of production, and even factors of production. The ecological theory correctly suggests that the environmental limitations determine production (Bowles 1979:196). Thus the dynamics of the post-independence Maragoli socio-political realities were explained in terms of interrelationship with the ecology, access to the resources it bequeaths upon the society and the evident patterns of social practices in the normative structure of relations in the area. The Maragoli farmer like other post-independence farmers and pastoralists demonstrated an energetic resourcefulness in meeting environmental pressures that threatened his security and at times his survival. Thus as elsewhere in Africa where man was striving towards affluence, organizing his activities in response to this basic thrust within the restraints of environmental limitations, the Maragoli society developed social and political institutions that were therefore in part attempts to ensure some sort of orderly process of production, distribution and consumption of life's necessities (Amisi 2019).

The environment dictates the means of production, the mode of production and even the force of production which in themselves constitute the Maragoli post-independence material realities upon which various forms of consciousness develop and grow. Seen in this light, environmental problems were ponderable which ought to set historians thinking in their analysis of localized societal characteristics that had evolved from age old interactions with their ecologies. To enhance their soils, Maragoli had embraced a number of strategies including cow manure, chicken droppings, refuse from household and the farm and green manure to boost soil fertility. Planting trees, hedges together with digging of terraces and trenches were found to be among the major mechanisms to control soil erosion in the area (Verma 2001:76).

Policy measures regarding the Maragoli land use

Land use policy in Kenya and Maragoli in particular focused on improving productivity and expanding peasants' economic gain, enhanced food security and equity. Looking into the future, the Maragoli ought to emphasize on irrigation to introduce stability in agricultural output, commercialization and intensification of production especially among small scale farmers, appropriate and participatory policy formulation and environmental sustainability. The key areas of policy concern therefore, include: Increasing agricultural productivity and incomes especially for small-holder farmers, emphasis on irrigation to reduce over-reliance on rain-fed agriculture in the face of limited high potential agricultural land. In addition, encouraging diversification into non-traditional agricultural commodities and value addition would reduce vulnerability. Enhancing the food security and a reduction in the number of those suffering from hunger and hence the achievement of Millenium Development Goals (M.D.Gs), encouraging private-sectorled development of the sector and finally ensuring environmental sustainability (Allila & Atieno 2006: 15). In order to better land use in Maragoli, the following key policy concerns should be addressed;

Declining agricultural performance; Maragoli society being an agrarian economy, any obstacle to agricultural success adversely affects the society in terms of job creation, food security and the established socio-economic strata (UNDP 2002:10). Even with the 1990s dismal performance, agriculture remained a key player in sustaining lives of an overwhelming majority of the working class. It has been recognized that low productivity, reflected in low yields per acre of land was among the main sources of high unit production costs in agriculture in Maragoli. Among the reasons that explained this was the inability by farmers to afford readily available modern technologies of farming (Allila&Atieno2006:20). The objective of policy makers in this area, therefore, should be to increase output using improved technologies of farming, which would inevitably increase farm productivity and hence farmers' incomes. The Maragoli for example as already established were traditionally banana growers (Wagner1956, UNDP 2002:10). Introduction of better banana varieties such as the tissue cultured bananas would go a long way in improving the Maragoli banana crop productivity and give the venture a more commercial and economic viability. The zero grazed animals due to limited space, Maragoli farmers should be sensitized on how they would make use of modern feeds such as hay; molasses and dairy meal which would enable the farmers produce higher quantities of milk within their limited farm plots(UNDP 2002:15).

The SRA (2004-2014) recognized that to improve smallholder farm productivity as well as increase incomes; smallholder farming must be changed from producing for subsistence to commercial profitable businesses. It would then attract private entrepreneurs willing to invest therein and employ modern farming techniques necessary to achieve increased productivity. When agriculture is technology-led, not only is food security achievable but also poverty alleviation is also possible. Inability to afford new and readily available farming technology, however, was partly blamed on poor access to financial resources, especially in a region where the majority and not only farmers, were poor and the financial markets had not developed to support agricultural investment. Poor marketing facilities and institutions were some of the constraints to increased agricultural production. The major marketing constraints comprised high transportation costs due to dilapidated roads, improper handling of farm produce, poor storage facilities and wastage. These resulted in fluctuations in both productions and incomes. For livestock marketing, limited cattle holding grounds and meddling with stock-routes had limited access to markets. Promoting marketing of agricultural produce required that holding grounds, watering points, stock-routes and livestock markets be developed; the private sector be encouraged to invest in slaughter houses and cold storage. County government in collaboration with the private sector ought to invest in storage facilities (Allila& Atieno 2006:20). The government is hereby challenged to provide all-weather rural access roads, improve communication facilities and market information systems among others. The two sets of interventions, in enhancing agricultural productivity and marketing systems as recognized too by the SRA (Republic of Kenya 2004: 21) would lead to agricultural growth.

Mis-application of technological innovations; Technological innovations have had positive impacts on the management of natural resources in Maragoli. Among the biggest commendable efforts in technological innovations has been the blending of modern and traditional practices. This blending has been through a practice known as agro-forestry in the last 10-15 years. In Maragoli for example right from the colonial era, the area chiefs were directed by the government through their *barazas* to ensure that every farm had the required tree coverage especially the eucalyptus variety. They even went to an extent of commissioning and supervising tree planting on public holidays (Wagner 1956). However, failure to balance with the traditional varieties led to depletion of underground water due to the modern trees' high water consumption rate. Maragoli joined other regions in Kenya like Central and Eastern to incorporate traditional knowledge and skills with new farming technologies propagated by the Kenya Forestry Research Institute, Kenya Agricultural Research Institute and the International Centre for Research in Agro-forestry that had resulted in amazing increase in yields. This was demonstrated in a variety of ways; first, the majority of the Maragoli in the post-independence era prefer the cross bred maize varieties to purely exotic ones due to the former's higher resistance to pests and even natural disasters such as storms and droughts. The grade cattle also after their introduction were cross bred with the indigenous to make them resistant and step up the productivity of the indigenous cattle. This has made the cross bred animals very popular in Maragoli and a distinctive mark of the economically empowered middle class (Muhandale, Tafrotsa, Avuya O.I: 2015, Amisi 2019).

The Maragoli farmers in the post-independence era inter-planted their tea bushes with their banana varieties to boost food production and maximize land use. A new variety of bananas; the Tissue Cultured Bananas (TCB) due to their high productivity and faster maturing were intercropped with

the traditional bananas. The traditional bananas were considered sweeter and with longer lifespan. The chicken industry had not been left behind. A number of farmers were interbreeding the modern breeds with local breeds to come up with faster maturing and bigger but still fairly resistant chicken varieties as exemplified in the *Mfalme* and *krailer* chicken variety popular in Kitale (Amuhanda, Mwamili, Tafrotsa O.I: 2015 Amisi 2019). Looking forward, such efforts should be encouraged through more research. More awareness should also be created to farmers in order to increase productivity to go beyond subsistence and get into commercialized scale to make it more economically viable to the involved farmers.

Limited potential agricultural land and over-reliance on rain fed agriculture; Maragoli land was found to be part of the 17% of Kenya's high and medium potential agricultural land where most intensive crop and dairy production took place. The Maragoli land therefore was found to hold a strategic position in determining Kenya's next economic trajectory. This meant that increasing agricultural production would have to come from intensification of land use in the high and medium potential lands. The high reliance on rain fed agriculture vulnerable to weather variability led to fluctuations in production and incomes especially for rural areas. There was low utilization of irrigation potential. Poor rains led to poor agricultural performance and the subsequent famines affecting large sections of the population. This spilled over to negatively affect agricultural incomes and hence investments in rural areas (Were, M., *et. al.* 2005).

Droughts and floods had increased in frequency and intensity in the immediate past three decades, resulting in high crop failure and livestock deaths. In addition, increased land degradation also decreased land resilience thereby exacerbating the effects of droughts and floods leading to devastating famines that claimed increasing human and livestock lives. Recurrent droughts, floods and the associated losses were concerns that featured much in public debate in the recent past. Over reliance on rain-fed agriculture, therefore, could be seen as one of the major causes of food insecurity. Despite the enormous potential for irrigation, irrigation based farming was not widely practiced. This had been due to low utilization of water, lack of efficient technologies, destruction of rainfall catchment areas, degradation of surface water and uncontrolled exploitation of underground water leading to a drop in the water table and increase of water extraction costs. Putting more emphasis on irrigation was important in increasing arable land, productivity per acre of land, stability of agricultural output during adverse weather conditions and stemming famines achievable only with addressing factors that hindered irrigation efforts (Republic of Kenya 1999:23).

Limited diversification of agricultural production; the region received adequate amount of rainfall, which were evenly distributed in most seasons. These were very conducive for agricultural production in most of the years. However in some seasons, the rains were erratic with heavy downpours followed by prolonged dry spells. Most farms in the constituency were not mechanized as the farms were very small and therefore human labour was mostly utilized in crop production. The region still had a food deficit requiring over 100,000 bags of cereals to meet the demand from neighbouring counties of Nandi, Uasin Gishu, Trans-Nzoia and Kakamega. To address food insecurity, the Agriculture department through the extension approach should continue to emphasize on the introduction and multiplication of new imported cassava and sweet potato

varieties, rehabilitate the banana orchards through improved management and introduction of high yielding tissue cultured materials and also develop alternative high value cash crops for local consumption and “export” to earn cash for buying maize. Such high value cash crops include traditional vegetables, Asian vegetables and improved bean varieties (VDEAP 2009-2013). In regard to livestock keeping, the table below shows the livestock population figures and their distribution in the constituency as at the end of 2004

Table 1: Livestock production data

Livestock	Quantity
i) Cattle	
Grade	5700
Zebu	17400
ii) Chicken	
a). Indigenous	54000
b). Layers	3700
c). Broilers	2000
d).Cockerel	700
e).Others	1200
iii). Pigs	320
iv). Hives	
a). Top Bar Hives	90
b). Traditional	50
c). Langs	30
v). Goats	
a). Small East Africa	3300
b). Dairy Goats	200
Vi). Sheep	3400
vii). Rabbits	2600

NB: Others include – Turkeys, Geese and ducks.

Source: Vihiga District Environment Action Plan 2009-2013 p. 10-11

There was an increase in all the enterprises. This could be attributed to farmers diversifying in their production to contain certain risks. Increase in indigenous cattle could be attributed to small sizes and also farmers keeping some for cultural/ traditional functions. The dairy industry produced on average 8 litres of milk per cow per day for grade cattle, while the local Zebus gave on average 4 litres of milk per cow per day. The amount of milk produced met only about 54% of total milk requirements. Most of this milk was sold through hawking and or through contractual verbal agreements. Milk produced fetched the farmers Kshs. 120million and a litre of milk being sold at Ksh. 25 (VDEAP 2009-2013). With this milk production, there still existed a deficit which was offset through supplies from the neighbouring Nandi and Kakamega counties.

In order to improve livestock breeding, LPD acquired bull schemes, private bull schemes and GOK Artificial Insemination (A.I) services and private A.I schemes were found to be in use. The charges ranged from Ksh. 200 to Ksh. 300 per service for LPD bull schemes while private bull custodians

charged between Ksh. 250 and Ksh. 500 per service. A.I schemes charged between Ksh. 400- 3500 depending on the source of semen and this excluded transport. In the poultry industry, it should be noted that most of the farmers were going in for the indigenous poultry production due to high initial capital requirement by the exotic birds' production. This had borne fruit as Vihiga District farmers Group (VDFG) was formed to coordinate farmer activities towards production of local birds (VDEAP2009-2013). This had resulted into holding 15 farmer workshops and 6 meetings. This group met every second Monday to deliberate on issues affecting them. Dairy goat keeping was becoming a major undertaking among the farmers due to ever diminishing land sizes. A bottle of goat's milk was sold at Ksh. 30 per 750 mls bottle. Most of the goats produced on average three bottles of milk per day. The breeds kept were mainly German Alpines, Toggenburgs and their crosses. NGOs like Africa Now, CPDA- Christian partners Development Agency and IIRR – International Institute of Rural Reconstruction had been promoting this enterprise by procuring the breeding stock for farmers groups (Muhandale, Mwamili O.I:2015, Amisi:2019).

On bee keeping there was appreciable improvement as other partners like Africa Now provided some Langstroth hives for farmer groups to improve on their production. Maragoli land had not made the best use of the resources within the region. In order to optimize the use of such resources, diversification into non-traditional commodities was necessary. This would increase farm productivity and greatly reduce famine and thus food insecurity. The region had conducive weather patterns favoring ventures into agribusiness opportunities like horticulture, herbs, spices, fruits and even lean beef, but which had not been exploited to the fullest. Agricultural yields in Maragoli were sold after very little or no value addition at all. This has resulted into limited income to farmers and creation of fewer employment opportunities for citizens. In order to make agriculture a paying venture in Maragoli, precise and urgent decisions should be made to promote agroprocessing. Some of these measures recognized by SRA (2004-2014) include, provision of appropriate incentives for establishing agro-industries in rural areas such as Maragoli; focused research on value addition regarding processing, storage and packing of agricultural produce; promotion of partnerships between peasants and agribusiness; improvement of roads, rural electrification, water and telecommunications; and sensitizing farmers on value addition (Allila & Atieno 2006:28, Republic of Kenya 2004).

Inadequate infrastructure; Maragoli land being part of the rural set up in Kenya was characterized by inaccessible roads, inadequate marketing facilities and inaccessibility to input and output markets together with limited access to electricity. All these infrastructural challenges made expansion in agriculture impossible. The performance of the sector was affected right from the production to marketing domestically and even regionally. Although agriculture has over the years contributed more proportionately to GDP growth in comparison to other sectors, this has been partly due to infrastructure established through efforts made for specific commodities (Republic of Kenya 1999, 1995). Some of these include provision and maintenance of rural access roads to facilitate the movement of agricultural produce to markets, establishment of agro-based industries to increase the value of agricultural produce, education, training and extension services to enhance the adoption of modern farming techniques, establishment of local market centres to open up markets for farmers produce, rural electrification to facilitate agro-processing and safe storage for the produce. Most of these services had been provided centrally by the government through various

concerned implementing ministries, until when new fiscal reforms were initiated after the realization that the productivity of the funds was not very effective (Amisi 2019).

Insufficient research in agriculture; During the first decade of independence, agricultural research emphasized cash crops and major food crops leading to major breakthroughs in these commodities, which largely contributed to increased agricultural production. There was however insufficient appreciation of the economic contribution of small scale farming, leading to research being based on input levels that were uneconomical to the peasants. Productivity from small scale farms has therefore been lower than from the large scale farms. Agricultural research was also not coordinated, until the creation of the National Scientific and Research Council. Training for agricultural extension staff also expanded (Alila & Atieno 2006, Republic of Kenya 1999). Inadequate research, especially demand driven research, coupled with ineffective extension and delivery system of research findings has been yet another concern. The decline in government allocation to the sector has contributed to this continuing trend.

The results here include decline in other agricultural services like Artificial Insemination services, lack of good quality seed and planting materials for farmers. High costs have led to inadequate application of improved purchased inputs on most of the farms. A major concern with respect to research in Kenya at large was also that the limited research activities generally cover only export crops, ignoring the essential food crops. The research system in place for agriculture particularly in Maragoli also faced a number of problems including but not limited to lack of strong research-extension-farmer linkages, inadequate funding, and high turnover of research scientists due to poor incentives (Republic of Kenya 2004). The provision of services had also been affected by too many official interventions especially in commodity marketing and pricing, characterized by proliferation of parastatal activities in pricing controls of agricultural commodities. Institutional failure due to lack of capacity by the private sector to take over the functions previously performed by the state after liberalization of the sector had aggravated the situations. Limited investment and coordination by local research institutions like KARI and institutions of higher learning was also a concern. A number of constraints had however hindered further progress in research. Lack of well-defined priorities that reflected policy pronouncements, lack of monitoring and evaluation, low use of trained scientists from institutions of higher learning and low funds for research had all contributed to the concern (Amisi 2019).

The ability of Maragoli agriculture to play its role in the economy depended on the research agenda that the region charted out for its agricultural research system. The international agricultural research centres were therefore only to complement local research output. Although agricultural research was coordinated by Kenya Agricultural Research Institute (KARI), a critical problem was availability of research funds. Research expenditure as a percentage of GDP remained below 10%, although most financing had been done by donors (Republic of Kenya 2004).

Inadequate Agricultural funding; Lack of finance for agriculture limited increasing production and investment in value addition activities in agriculture. Inaccessibility to credit especially for small scale farmers and especially women had limited the range of activities, the type of technology used and the scale of operations that a farmer could adopt on his farm. Agricultural credit available to farmers had tended to diminish over time since independence (Republic of Kenya 2004). Although

there had been a number of institutions that were involved in agricultural financing over time, actual investment in the sector had been small. Thus to improve agricultural productivity and incomes, especially of smallholders most of whom resided in rural areas, access to affordable financial credit was important to enable them acquire new farming technology - a necessary input in realizing the higher productivity goal. There had been a bias of credit towards large farms and cash enterprises. Poor mobilization of financial resources through weak cooperative system and grass root organizations were to be addressed (Alila & Atieno 2006, Republic of Kenya 2001).

Impact of uneconomical land subdivision and land subdivision

Outmigration; Through the study, it was found out that due to the limited land space in Sabatia, a significant proportion of the people had migrated from the constituency to other places. Several reasons were given as to why a family member had moved. These reasons included employment, search for education, purchase of new land, and marriage. Among the key areas where such people had migrated to included Nairobi, Nakuru, UasinGishu , TransNzoia, South Nyanza, and Kisumu (Kagota, Amuhanda O.I:2015).

Increased economic hardships; Uneconomic land subdivision had resulted to low farm yields thus affecting household income. On-farm economic activities through small scale farming were reported to be about 67%. Both livestock and crop farming was practiced with Zebu cattle as a local breed being largely reared. Output from this type of farming was mainly for subsistence use due to low yields. The low yields from the farms had resulted into a growing trend of off-farm activities with small scale businesses contributing to about 43 %. Small land sizes had resulted into the clearance of vegetation cover, some of which were a source of wood fuel and also water catchment areas. The community had now to buy charcoal sourced from the neighbouring counties which was usually supplied by bicycle vendors. Similarly, cleared wetlands had impacted negatively on the economy of the region. Some of the community members had depended on such ecosystem for livelihoods; for instance traditional medicinal substances were got from parts of vegetation growing wild or in the wetlands. Building materials like reeds for thatching or making poultry cages were also fetched from such wetlands which had now been cleared (Amwai, Muhandale O.I:2015, Wagner 1956, Mise 2017; 47-50). Those people used to derive livelihood from such activities had been forced to look for alternative source of livelihood.

Environmental degradation; Because of small land size, the ever increasing population pressure had resulted into over cultivation of soil in Sabatia constituency. As a result, crop yields had decreased over time. The use of commercial fertilizer was encouraged in an effort to increase the yields. Scarcity of land had led to people draining wetlands and clearing bushes in an effort to increase the land for food production. The wetlands were very important ecosystems whose value was yet to be quantified. Planting tea bushes and tree species such as Eucalyptus had been done near water sources including swamps and wetlands. This had had an ecological effect as these trees absorbed a lot of water hence drying up wetlands (Amwai, Inyangala O.I:2015).

Led to loss of biodiversity; Big animals such as lions, leopards, antelopes and hippos which used to be found in the study area were no more. The rising population and demand for land had led to disturbances of the once balanced ecosystem. Their habitat and nesting included vegetation cover that was being cleared to create room for farming and wetland that was being drained to pave way

for farming. This had resulted into the reduction of the biodiversity of both flora and fauna in the study area. Wetlands used to be habitats for some birds. Clearing such important ecosystems rendered such bird species endangered. Disappearance of such animals and birds had greatly impacted on the Maragoli social fabric in the sense that traditional cultural attires were made from such animal skins and later decorated with a variety of birds feathers (Mise 2017:68, Amuhanda, Muhandale O.I:2015).

Has increased land related conflict; during the research, respondents admitted that there were land related conflicts both at household and community level. Key among these disputes included boundary disputes, disputes on how family land was to be shared and disputes as it regards who was entitled to develop the land. Among the institutions that help solve these disputes included local administration such as the village elder and the chief, members of the extended family , church leaders , courts and finally friends (Mise 2017;67-68, Amwai , Inyangala O.I:2015).

Solutions to uneconomical land division

Alternative settlement pattern and house typology; Most of the respondents during the study preferred and were found to have settled in the dispersed settlement pattern. The main reason cited for this settlement was that it reduced possible conflicts at the household level. The respondents also revealed that the main challenge of this settlement was the ever increasing population that put pressure on the available land resource. However, given the current land production potential of the area, settlement pattern was highlighted as one of the causes of the reduced land productivity. Even though dispersed settlement was preferred in the area, the focus group discussion revealed that there was an immediate and urgent need to change the existing settlement pattern and housing typology. The community was to opt for clustered settlement where houses were to be located at one location based on soil suitability. The rest of the land would be farmed. The research noted that one of the shortcomings of dispersed settlement was wastage of land. This was because each household had to be provided with access road. In addition to this, costly provision of infrastructure and other services were noted (Mise 2017:59, Gumanyi, Chabaga O.I:2015).

On housing typology, the research foresaw the need to make best use of space by making best use of the vertical space. The idea was that three sons could live under one roof each occupying one floor instead of spreading houses on the farm. It was noted that the idea would take time to be embraced for it would require a major attitude change. Slowly, the idea would be adopted by the rest of the community as they learned its benefit from those who would be willing to pioneer (Mise 2017:65 Mwamil, Muhandale OI: 2015).

Population release from Sabatia constituency; from the research, informants believed that the land carrying capacity in Sabatia had been exceeded. They revealed that land had been subdivided into small portions to the extent that it was difficult to continue with any further subdivisions. They postulated that such problem of land fragmentation and subdivision could be reduced by releasing population pressure in Sabatia constituency. Citing example of the time when Mudete tea factory was being established, the inhabitants of the site where the factory was set were moved to different places as a way of creating space. The same method was used when Moi Girls Vokoli Secondary School was established. The residents who used to occupy the site were moved to the current Nandi County. Respondents in the study area believed that the county government could use the same

approach in easing the population in Sabatia constituency. This could be achieved by purchasing suitable land and relocating people to such places (Amuhanda, Chabaga, Muhandale O.I:2015).

Family Planning; High fertility rate and the resulting high population were pointed out to be among the leading causes of land fragmentation and uneconomical land subdivision. The need for family planning was best captured by words of the respondents during one of the Focused Group Discussion;

..Mlitanga Nyasayaye yavola mwivulane mwizulize kivala...eyo yali ing'inga rwa vanduvuri vadii na milimi minyinge... Kalunu kwizuriza kavara ni kuvaza na vana vaviri venyine...

...in the beginning God said, give birth and fill the earth...that time population was small and land in plenty...now to fill the earth is to have only two children...

This is alluding to the biblical verse Gen.1:28. Which Christians believe meant to increase the world population (Vwaye, Amwai O.I:2015).

Proper functioning and dynamic land market; In the first place, existing land market was hindered by lack of land title deeds. A very large population lacked legal documents of the land they own. In some cases, land was found to be in the ownership of the grandparents. This was despite grandchildren owning the piece of land acquired through inheritance. Because of this, such grand children could not pass land to any other person as they lacked the land title deed. Land market could help reduce level of land fragmentation by being structured in such a way that individuals willing to sell their piece of land were to first approach their neighbours and offer to sell to them. If the neighbours were in position to buy the land, then he/she could combine the land and increase its size. This would lead to a market based land consolidation as a solution to land fragmentation. However, lack of land title deed hindered the exchange of land property as it was the required legal document to prove ownership of the land (Mise 2017:69, Mwamili, Chabaga, Amwai O.I:2015).

Replace land inheritance with other forms of inheritance; Land fragmentation and uneconomic land subdivision had come about as a result of the tradition of inheritance. Tradition held that family land had to be passed to the next generation through inheritance. Available land had to be divided among the heirs. At times, available land was not enough for the number of heirs. As a result, the family head preferred to increase land available from which he could give out inheritance. Unfortunately, land available for purchase was not adjacent to the current land. He was forced to get land that was separated from his land by other land parcels. This resulted into land fragmentation. If the house head was unable to purchase additional land for their purpose, he was left with no option but to divide the small land available equally among the heirs. This resulted into small sized land units which were usually uneconomic for exploitation basing on existing systems of production (Mise 2017:70, Muhandale, Avuya O.I:2015).

The focus group discussion held the view that such causes of land fragmentation and uneconomic land subdivision could be avoided by replacing land as a form of inheritance with other forms of inheritance. They proposed education as the best alternative. This would require a major attitude change. Parents were to invest in education of their children while children of the current and future generations were to take education given by their parents seriously. They were to look at it as a form of inheritance. The respondents noted that the required average land size suitable for Sabatia

constituency and Vihiga County at Large was to be 15 acres per household. Among the actors who could help reduce land fragmentation as noted by respondents include family household heads, village elders, local administration, the church and large scale land consolidation government programme (Mise 2017, Amaganga, Muhandale, Amwai O.I: 2015).

Conclusion

The Maragoli post-independence agricultural realities as demonstrated in this paper are the actual products of the precolonial and colonial interactions. Through the articulation theoretical proponents; this paper has outlined that Maragoli land use practices need to be redesigned in order to enable the Maragoli society adequately benefit from the contemporary local and global opportunities available. When these opportunities are optimally made use of, the Maragoli land disputes, food insecurity and youth unemployment will have been amicably resolved for the common benefit.

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