

A contextual analysis for village land use planning in Tanzania's Bagamoyo and Chalinze districts, Pwani region and Mvomero and Kilosa districts, Morogoro region

Sustainable Rangeland Management Project



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ILRI PROJECT REPORT



A contextual analysis for village land use planning in Tanzania's Bagamoyo and Chalinze districts, Pwani region and Mvomero and Kilosa districts, Morogoro region

Sustainable Rangeland Management Project

Emmanuel Sulle and Wilbard Mkama

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Patron: Professor Peter C Doherty AC, FAA, FRS

Animal scientist, Nobel Prize Laureate for Physiology or Medicine—1996

Box 30709, Nairobi 00100 Kenya

Phone +254 20 422 3000

Fax +254 20 422 3001

Email ilri-kenya@cgiar.org

ilri.org

better lives through livestock

ILRI is a CGIAR research centre

Box 5689, Addis Ababa, Ethiopia

Phone +251 11 617 2000

Fax +251 11 667 6923

Email ilri-ethiopia@cgiar.org

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Acronyms and abbreviations

BIDP	Bagamoyo Investment Development Project
CHALIWASA	Chalinze Water Supply Authority
CHAURU	Chama Cha Wakulima Wa Ruvu
CSO	Civil society organization
DC	District commissioner
DAWASCO	Dar es Salaam Water and Sewerage Corporation
DED	District executive director
EPZA	Export Processing Zone Authority
GIS	Global information system
GN	Government notice
GPS	Global positioning system
ha	Hectare
ILRI	International Livestock Research Institute
JICA	Japan International Cooperation and Agency
JVLUP	Joint village land use plan/planning
km	kilometer(s)
LTSP	Land Tenure Support Program
LUP	Land use plan/planning
MKURABITA	Tanzania Business and Property Formalization Program
MoLF	Ministry of Livestock and Fisheries
MVIWATA	Mtandao wa Vikundi vya Wakulima Tanzania
NARCO	National Ranches Corporation
NLUPC	National Land Use Planning Commission
NGO	Nongovernmental organization
No.	Number

PLUM	Participatory land use management team
RAS	Regional administrative secretary
RAZABA	Ranch of Zanzibar in Bara
RIPOMA	Rice Post-Harvest Management and Market
SANAPA	Saadani National Park
SGR	Standard gauge railway
SMEs	Small and medium enterprises
SRMP	Sustainable Rangeland Management Project
t	Tonne
TFCG	Tanzania forest conservation group
TFS	Tanzania forest services
TPA	Tanzania Port Authority
UNDP	United Nations Development Program
USAID	United States Agency for International Development
VEO	Village executive officers
VLUP	Village land use plan/planning
WARIDI	Water Resource Integration Development Initiative
WMA	Wildlife management area
WOPATA	Women and Poverty Alleviation in Tanzania
WSDP	Water Sector Development Program

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Executive summary

As individuals, communities and companies rush to secure land for various uses, protecting rangelands for pastoral communities in Tanzania is a real challenge for many actors in the livestock sector. The Sustainable Rangeland Management Project (SRMP) explored opportunities to ensure pastoral rangelands are documented, secured and protected. The project is led by the Ministry of Livestock and Fisheries (MoLF), the National Land Use Planning Commission (NLUPC), and the International Livestock Research Institute (ILRI), working with local civil society organizations (CSOs), district governments and communities. The project is funded by the International Fund for Agricultural Development (IFAD), Irish Aid and the International Land Coalition (ILC), contributing to ILC's national engagement strategy in the country.

SRMP developed, piloted and scaled up the process of joint village land use planning (JVLUP) in pastoral areas as a tool for resolving conflicts between land users, rationalizing land use and ensuring that adequate land is protected for local livelihoods now and in the future. As part of this process, a context analysis was commissioned by ILRI regarding two new potential areas in which the project may work.

The overarching objective of the analysis is to understand contextual issues, challenges and opportunities for undertaking JVLUP in two clusters of districts in Pwani and Morogoro regions. The study undertook interviews with key stakeholders from the NLUPC, regional offices, district councils and CSOs, over a period of two months in mid-2018.

Key findings of the study include the following:

- i Livestock are essential assets for livelihoods, a critical source of savings, and key to alleviating poverty in the pastoral communities. In three of the studied districts, livestock production is the second largest source of income.
- ii Tanzanian land legislation provides grounds for establishing joint village land use agreements between villages. The Village Land Act 1999 empowers villages to delineate grazing areas, and the Grazing Lands and Animal Feed Resources Act 2010 requires villages and districts to establish livestock movement corridors where grazing land can be solely used for livestock grazing, marketing and infrastructure. While in theory establishing a JVLUP is legally sanctioned, in practice, such plans face many political, socio-economic, environmental, cultural and technological challenges.
- iii Prior and ongoing implementation of village land use planning (VLUP) secure rural people's land rights and also helps reduce land-based conflicts. Yet, VLUP processes, especially if they are not fully participatory, may not meet intended goals of securing access to land and other natural resources. Instead, in all four districts in this study, pastoralists are treated as newcomers and in most villages dominated by farmers, pastoralists do not fully participate in decision-making including in village assemblies and village councils. This significantly affects pastoralists' ability to influence key decisions about VLUPs and land allocation for different purposes.

- iv Pastoralists are affected by cultural and traditional barriers: weak civic and formal education, and inadequate engagement in political decision-making. In all four studied districts, very few pastoralists participate in village and district council meetings. They often do not attend village meetings due to (1) the often migratory nature of their livelihoods in search of pasture and water or to access markets, and/or (2) they are intentionally ignored and/or meetings are planned on market days, when it is likely that pastoralists cannot attend as they are selling livestock. This situation affects their understanding of plans and activities at the village and district levels, and prevents their voices from being heard regarding injustices, and their genuine need and demand for land and water access.
- v At a higher level, whether intentionally or not, most development programs and schemes target crop agriculture, and focus on securing land and infrastructure for crop farmers. The needs of pastoralists and the direct and indirect impacts of such programs on pastoralist communities are not considered. For example, irrigation schemes along rivers likely subsume important dry season grazing areas and do not provide access routes to the river for watering livestock. In fact, as this study and many previous studies show, often pastoralists are seen as an obstacle to development projects. The impact of these programs on pastoralists is frequently not considered and pastoralists' positive contribution to the local economy is not acknowledged.
- vi Farming practices are the source of land-based conflicts, especially among bush farms and shifting cultivation. Bush farms are usually only visible when crops are growing; post-harvest bush farms appear uncultivated and are therefore difficult for pastoralists to recognize meaning livestock may wander on to the farms whilst migrations are taking place. This has led to conflicts between pastoralists and farmers.
- vii Recognition and protection of pastoralists' rights is weak, despite Tanzanian legislation providing for equal rights to property including land for all citizens. Because pastoralists' use of land is seasonal, especially in rangelands, their land is often at risk from incursions by other groups, amplified by increased demand for land. Incursions are sometimes compounded by historical and contemporary large-scale land alienation for economic development and biodiversity conservation.
- viii At the moment, low-level conflicts pit pastoralists against farmers in all studied districts. However, recent declines in conflict can be attributed to high rainfall levels over the past two years which has provided sufficient pasture and water. The current situation is likely to change once serious droughts occur, similar to conditions two to three years ago.
- ix At the district level, officials are ready to implement land use planning (LUP), but some fail to complete plans either because of conflicts between villages and other authorities, for example conservation bodies, or because of poor engagement of all village members in planning processes. In addition, administrative subdivision of villages renders older plans obsolete.
- x Despite several challenges in implementing LUPs in studied districts, all levels of government support LUP including JVLUP. As an income-generating activity, district officials are aware of the importance of the livestock sector, but their capacity to support LUP is limited by poor budgetary allocation and inadequate human resources.
- xi The three district councils of Chalinze, Mvomero and Kilosa provide potential for SRMP to have significant impacts on the lives of pastoralists where their land rights continue to be threatened by increased demand for land. The proposed changes in Bagamoyo include plans for growth of urban and industrial areas; these mega-projects make engagement there challenging.

Recommendations

Though the context analysis is sufficient in providing a good understanding of the socio-economic and political background for VLUP in these districts, it is recommended that further steps are taken before VLUP commences including:

Conduct detailed baseline studies at the village level: understanding social patterns and grassroots politics is essential to LUP and project sustainability. This should include understanding of any disagreements or conflicts of land use, boundary issues, interests of different stakeholders and the engagement of different community groups in decision-making processes.

Focus on districts where the context is more amenable for planning: though there is significant presence of livestock and pastoralists in Bagamoyo, the changes that are being proposed at high levels in terms of land use in the district from village land to urban or industrial use raise concerns that are unlikely to be addressed within the project's lifetime. It is therefore recommended that the project focus on other districts than Bagamoyo for further scale up of JVLUP.

Advance the need for legal reforms to respect and protect the rights of formalized village lands: government and other stakeholders working on LUP need to respect and protect completed VLUPs, including JVLUPs because these plans are costly in terms of finance, time and other associated efforts. Those supporting VLUP processes also need to invest resources in advocating for reforms of current laws and regulations to provide a more enabling environment for planning to occur.

I Background to the study

I.1 Context

Securing rangelands is key in protecting the livelihoods of pastoral communities in Tanzania. Pastoralists require a high degree of mobility to access the needed quantity of forage which varies depending on climate, particularly rainfall (Mattee and Shem 2006). However, as individuals, communities and companies rush to secure land for various uses, protecting rangelands for pastoral communities in Tanzania is a real challenge for many actors in the livestock sector.

SRMP explored opportunities to ensure pastoral rangelands are documented, secured and protected. The project is led by the MoLF, NLUPC and ILRI, working with local CSOs, district governments and communities. The project is funded by IFAD, Irish Aid and the ILC, contributing to ILC's national engagement strategy in the country.

SRMP developed, piloted and scaled up the process of JVLUP in pastoral areas as a tool for resolving conflicts between land users, rationalizing land use and ensuring that adequate land is protected for local livelihoods now and in the future. JVLUP is usually carried out in a situation where two or more villages share forest, grazing or wildlife resources that stretch across their boundaries. JVLUP is adopted as an extra layer of planning and land security on top of individual VLUPs and/or district land-use frameworks. As well as a JVLUP or agreement, the process establishes a management structure or body which jointly manages an area or areas set aside by member villages as rangeland.

Tanzanian land legislation provides grounds for establishing joint village land use agreements and/or plans between villages. The Village Land Act 1999 empowers villages to delineate grazing areas, and the Grazing Lands and Animal Feed Resources Act 2010 requires villages and districts to establish livestock movement corridors where grazing land can be solely used for livestock grazing, marketing and infrastructure. The law categorically states that grazing land is to be managed in a sustainable manner as prescribed by the minister in consultation with the village council. In theory, establishing a JVLUP is legally sanctioned but in practice, establishing such plans face a number of political, socio-economic, environmental, cultural and climate change challenges. In addition, there may be disagreements within families and between villages over who should access particular land (Maganga 2002). Maganga (2002) has also pointed to the relevance of ethnicity with conflicts between ethnic groups leading to violence.

Despite some legal provisions, competition between farmers and pastoralists is a common feature of land use management (Benjaminsen et al. 2009; Homewood et al. 2004; Maganga 2002; Matee and Shem 2006). Farmers and pastoralists attempt to establish various land use management practices which leads to conflict; neither pastoralists nor farmers agree to adhere to each other's land management systems. Conflict is particularly exaggerated in the dry season when water and grazing become scarce (Maganga 2002).

Conflicts have been exacerbated by development agencies and the Tanzanian government promotion of foreign investors' access to land which encourages privatization and individual ownership of previously communally shared land and resources (Fratkin 2014; Maganga 2002). When land was given over to large-scale agricultural production, pastoralists lost access to grazing (Maganga 2002)

Similarly, efforts to ‘modernize’ agriculture created an environment that is not conducive to pastoral life (Benjaminsen et al. 2009). Such efforts ignore the efficacy of pastoralism as a strategy for animal production (Matee and Shem 2006). As Homewood et al. (2004, p. 569) point out, ‘permeable social and spatial boundaries’ allow pastoralists to move ‘rapidly in a variable and unpredictable environment’. Despite the successes of pastoralism, pastoralists increasingly face discrimination, exclusion and violence. In the Kilosa district, one of the districts covered in this research, attempts to keep herders confined to villages led to their inability to access sufficient grazing and water for their livestock (Benjaminsen et al. 2009).

Environmental concerns have also been expressed, with the accusation that pastoralism leads to soil erosion (Matee and Shem 2006; Homewood et al. 2004) and negative impacts on efforts to protect wildlife areas, particularly where livestock face attacks from carnivorous predators (Dickman 2008). However, as Dickman (2008) points out, environmental conflict between conservationists and pastoralists partly results from pastoralists exclusion from tourism and other nonconsumptive wildlife benefits. Nelson (2012) also argues that Maasai pastoralists manage their land use such that both wildlife conservation and pastoralism can survive on the same land. He argues that for land to provide tourism and livelihood benefits, traditional land use practices should be encouraged.

Given these conflicts, establishing a VLUP may encounter many difficulties. In order to inform the process and scaling up of JVLUP that SRMP supports, a context analysis was commissioned by ILRI to study two new potential areas in which the project may work.

1.2 Objectives and scope of the work

The main objective of this short-term assignment was to collect relevant data and maps, and to conduct a contextual analysis in two clusters of districts in Tanzania. The terms of reference required field research in Bagamoyo and Chalinze districts (first cluster) and Mvomero and Kilosa districts (second cluster). In these districts, the following activities were undertaken:

- i. Consultation with key stakeholders (under guidance of project staff);
- ii. Interviews with key informants at the district level to understand the local political, economic, environmental and social context, and any underlying issues in the area that might impact LUP processes;
- iii. Interviews with national and regional stakeholders including government, nongovernmental organizations (NGOs), communities, the private sector and conservation organizations to determine plans for developing the districts, such as any large infrastructure, protected areas, extractive industries, planned investments including large scale farming, government ranches or projects/programs by development actors;
- iv. Collection of maps, reports and other documents deemed useful for the project and its understanding of the local context; and
- v. Writing of a report, with accompanying notes from key informant interviews at the district level with all participatory maps copied, including recommendations for village clusters suitable for JVLUP based on the information collected.

1.3 Methodology

In order to meet the objectives of this study, the researchers combined qualitative methods (document reviews and key informant interviews) with quantitative analysis of data obtained from primary and secondary sources, and from previous and ongoing studies in the country. The researchers also drew as much information as possible from key informants in various organizations working in land administration (Ministry of Lands, NLUPC, MoLF and regional

offices), CSOs working on land rights and tenure security in the country, the private sector in the case study areas, and any other actors identified during the course of this study. All gathered information was critically analysed using a PESTEL model— a tool which analyses all political, economic, social, technological, environmental, and legal factors which may facilitate or inhibit a process such as LUP in study districts. Additionally, quantitative data were analysed using regression techniques; results were presented in tables and graphs.

In addition, in all districts, the researchers closely worked with partner CSOs involved in the implementation of SRMP—Parakuiyo Pastoralists Indigenous Community Development Organization and the Help Foundation.

2 Pwani region

2.1 Introduction

Occupying a large area of the coast, Pwani region is known for its vast areas of land under cashew nut cultivation and industrial sites due to its close proximity to Dar es Salaam. The region is second in position after Dar es Salaam for attracting investments in the country. The original residents of Pwani region were mostly farmers but the socio-economic structure changed over time. After pastoral communities immigrated from northern and lake zones of Tanzania, the region now hosts farmers, agro-pastoralists and pastoralists as well as business people. The arrival of these other communities stimulated the region's economy through increased consumption and production of goods and services—all of which have increased jobs.

However, the movement of pastoralists into the region caught the regional administration by surprise. According to regional officials, evictions of pastoralists from Kilombero and Ihefu caused some of the more recent arrivals of pastoralists. In both Kilombero and Ihefu, pastoralists were removed on government orders to protect areas claimed to have significant environmental value to the nation. Kilombero was declared a Ramsar site¹ in 2002, while Ihefu is the source of the Great Ruaha river which supplies water to the hydro power stations that provide more than half of Tanzania's electricity. Of particular concern is that evictions involved massive extortion, corruption and dispossession of pastoralists' livestock assets, as well as extensive violation of human rights, including arbitrary arrests and killings (IWGA 2016: 24).

Initially, the government relocated the evicted pastoralists to Lindi and Mtwara regions, but the proposed areas were infested with tsetse flies, so pastoralists moved. They tried to settle in the Pwani region because it has three major rivers that cut through the region: Wami, Ruvu and Rufiji; these rivers are known for wide basins rich in grazing. The Chalinze district government dealt with the influx of pastoralists to the best of their ability; the regional government recognizes the positive contributions and impact of pastoralists, and regional officials indicated that they would welcome and fully support initiatives to encourage and implement LUPs.

The region is also endowed with grassland attracting major investments from the National Ranches Corporation (NARCO) with its headquarters in the Kibaha district. Officials believe that once more infrastructure is in place, grazing areas under NARCO could provide pastoral communities with opportunities including agreed use, especially if the areas remain under-utilized.

¹ A Ramsar site is a wetland site designated to be of international importance under the Ramsar Convention. The Convention on Wetlands, known as the Ramsar Convention, is an intergovernmental environmental treaty established in 1971 by UNESCO, which came into force in 1975. It provides for national action and international cooperation regarding the conservation of wetlands, and wise sustainable use of their resources.

In addition, despite the presence of major rivers, some parts of the region do not have permanent water access. During drought, grazing is significantly reduced in these areas. This illustrates the importance of taking into consideration water needs and deficits during LUP.

The region hosts a number of protected areas such as Wami Mbiki wildlife management area (WMA), and Ruvu North and South forest reserves, which are catchment areas to Wami, Ruvu and Rufiji rivers. Rapid increase of human activity in and around these areas have degraded parts of the conserved catchment areas, resulting in siltation, for example, at the river Wami at Wami Water Station.

2.2 Bagamoyo district

Introduction

Known for its historic, cultural and spiritual values, Bagamoyo district is a key tourist and investment destination in Tanzania. It is one of the seven districts forming Pwani region, with district headquarters located 65 kilometres (km) north of Dar es Salaam. It borders Morogoro district on the west; Mvomero, Kilindi and Handeni districts on the north; Pangani district on the northeast, the Indian Ocean on the east; Kinondoni district on the southeast, and Kibaha district on the south (URT 2012). Bagamoyo is divided into two district councils—Bagamoyo District Council and Chalinze District Council. Both councils have the same district commissioner (DC). However, the councils have different district executive directors (DEDs). Saadani National Park (SANAPA), the only national park located on the east African coast, is in Bagamoyo. The large Ruvu and Wami rivers cover 9,847 km² of the district. Based on the 2012 population census, the district has 97,660 people and 23,066 households with an average household size of 4.23 people. Based on the latest census results, the annual population growth is 2.2% per annum (National Bureau of Statistics 2012). Because of growing industrial and other economic activities in the district, Bagamoyo was recently declared a planning area in accordance with the Urban Planning Act of 2007. Many new developments are planned and/or already occurring which resulted in the use of grazing areas to develop port infrastructure. In addition, people displaced from port areas will need to be resettled (interviews with NLUPC staff, 25 June 2018).

Political issues

Interviews with district officials in Bagamoyo revealed that the district is transforming into a growth area, with the district council changing to a town council. According to Bagamoyo land officers, Bagamoyo covers about 9,000 km² but the actual area, including the sea area, is likely about 11,000 km². All of its eleven wards now form Bagamoyo town council, with all villages transformed into 'streets' excluding Mkenge village in Fukayosi ward, which remains a village. Despite the development of 'streets', most villages are only accessible in the dry season through a single road. Part of the development master plan for Bagamoyo includes road improvement. However, the district faces the challenge of a lack of funds to implement the master plan. Once the master plan is completed and all villages are converted to streets, the Village Land Act of 1999 will no longer be applicable, because streets are governed by the Urban Planning Act of 2007.

Politically, while the leadership has been highly supportive of VLUP until now, it is ready to accept the change from district to township status. It was felt that the changed status will attract benefits from the donor community, as donors such as the World Bank provide more funds for infrastructure development in townships and cities than in district councils. However, the change may take time, since changing from a district to full town authority also depends on political will at a national level, especially from the President's Office of Regional Administration and local government.

The table below highlights the positioning of the wards and respective potential change with regard to VLUPs.

Table 1: Wards and potential changes likely to happen

No.	Ward	Description
1	Magomeni	
2	Nia Njema	These wards are situated in Bagamoyo town area. There is no possibility of pastoralist activities in the area. These are the council's strongest core planning areas. The largest urban population of the Bagamoyo district resides in these wards.
3	Kisutu	
4	Dunda	
5	Kerege	These wards are situated along the Dar es Salaam road. The villages cannot support VLUP for pastoralist activities. The area is highly fragmented.
6	Mapinga	
7	*Fukayosi (Mkenge village)	Fukayosi ward receives water from Wami station whereas the Ruvu river flows through Makurunge ward. Available water creates good grazing areas. Currently, the area is inhabited by Maasai pastoralists. These wards are located along the Msata tarmac road heading to Tanga. The area is rapidly changing to more of a township with 'ribbon development' occurring along the Dar-Tanga bus route.
8	Makurunge (RAZABA* area)	
9	Yombo	Yombo has a significant amount of pastoralists. The ward possesses large grazing areas. However, many of these areas belong to individual absentee landlords.
10	Zinga	Officials in Zinga and Kiromo wards record no pastoralist activity in the areas. However, Barbaig pastoralists were seen grazing in these wards at the time of the study.
11	Kiromo	

Source: interviews July 2018

*Ranch of Zanzibar in Bara

Social aspects

Historically, Bagamoyo district was dominated by Zaramo, Doe, Kwere and Zigua people. Currently, the pastoral communities in the district include the Maasai and Barbaig. Modest immigration of the Maasai into the Fukayosi and Makurunge villages in the 1960s and 1970s did not pose resource challenges. Later, Barbaig communities immigrated to the area, which according to the regional livestock assistant regional administrative secretary (RAS), resulted from evictions in Ihefu and Manyara. As the number of pastoralists increases throughout Bagamoyo river basins, competition for resources occurs. However, due to the length of time in the area, Maasai pastoralists are now adopting the culture of local residents.

Environmental concerns

The ranch of Zanzibar in Bara (RAZABA) which is located in Makurunge and Fukayosi wards is a suitable area for grazing. The area hosts natural forests and grasslands, with Wami river crossing over. However, this area is now under private individual ownership and mostly deemed for commercial agriculture. Moreover, individual persons purchased, mostly illegally, individual plots and farmland in both villages. As a result, most available grazing areas in these villages are now privately used.

A boundary conflict between SANAPA and Bagamoyo District Council has its roots in inadequate participatory planning processes in the development of SANAPA and its boundaries. Apart from the border conflict with SANAPA, human-wildlife conflict has existed for years, particularly in villages bordering the park. For example, the Bagamoyo District Council chairperson reported that eleven elephants that moved to Fukayosi ward have caused serious damage (Table 2). Game rangers responded to the situation but the damage was already significant.

Table 2: Summary of existing Bagamoyo conflicts

No.	Type of conflict	Description
1	Boundary conflict	Between SANAPA and Bagamoyo district: the SANAPA demarcation process was not consultative resulting in misunderstandings between the district and the park. The conflict has still not been resolved. Between Bagamoyo and Kibaha district: residents dispute the border demarcated by Government Notice (GN).
2	Resource Conflict	Farmers versus pastoralists: mostly recorded along river basins with fertile land and an abundant supply of water Between pastoralists and DAWASCO (Dar es Salaam Water and Sewage Company), in the dry season, pastoralists have cut off DAWASCO water supply pipes to obtain water for their cattle. Dar es Salaam Water Supply Authority supplies water in nine out of 11 Bagamoyo wards. Chalinze Water Supply Authority only supplies Makurunge and Fukayosi areas with water as it has many challenges, including a shortage of water supply and power inefficiency issues. In Makurunge and Fukayosi, local wells provide reliable water sources.
3	Human-wildlife conflict	Elephants have been recorded crossing the SANAPA boundary and invading villages in Fukayosi ward, destroying major food crops such as maize. No solution has been found to the conflict.

Source: interviews, July 2018

The main environmental challenge in Makurunge and Fukayosi wards is increased clearance of forest for farmland, charcoal, timber and building plots, encroaching on existing and anticipated grazing areas. As a result, during the dry season, pastoralists are forced to dig up and cut through water pipes laid by DAWASCO in order to obtain water for their livestock. While over the past year, no violent conflicts occurred between pastoralists and other groups in the district, conflicts between pastoralists and other stakeholders tend to rise during the dry season as the search for livestock pasture and water intensifies.

Other major land stakeholders in Bagamoyo include the Tanzania Port Authority (TPA), Export Processing Zone Authority (EPZA) (with about 2,000 hectares (ha)), and Salim Said Bakhresa & Company, which was allocated about 10 000 ha by President John Magufuli to develop a sugarcane estate and processing company. This same land was formerly used by the Bagamoyo EcoEnergy Ltd (BEE), a 'special purpose project' of Agro EcoEnergy Tanzania Ltd and a subsidiary of Swedish-based EcoEnergy. BEE was to develop an 8,000 ha sugarcane estate and a 3,000 ha outgrower scheme in the area.

In 2013, BEE secured a 99-year title deed to about 20,300 ha², which the company described as a 'unique agreement with the government of Tanzania' (Chung 2015; ActionAid 2015). But the BEE's plans did not materialize due to a land dispute between the company and the local communities who protested and filed a court case to stop plans to resettle them. The dispute, along with the government's poor control of cheap sugar imports and failure to waive corporate tax on the BEE project, resulted in key funders pulling out in May 2015 (The Citizen 2016). According to the BEE company's executive chairman, in November 2016 the company 'received a letter from the Commissioner of Lands informing them that the partnership between EcoEnergy and the government can no longer be negotiated and that the government is no longer interested in the Bagamoyo EcoEnergy Project' (Ipp media 2017). While the company or the Ministry of Lands did not disclose the reasons for the termination of this project, the prime minister informed Parliament that the investment would have caused environmental destruction on the ecology of the area, and this was the reason for its cancellation (The Citizen 2016). Currently, though, the Agro EcoEnergy Company has filed an arbitration case against the government of Tanzania for cancelling its project.³

2 There are various reports on the amount of land acquired by this company: Sulle and Nelson (2012) indicate that the company was allocated 22,500 ha but the recent reports show the company possesses 22,300 ha (ActionAid 2015). These errors may be attributed to reporting and sources used by the authors (see Locher and Sulle 2013 on these reporting problems).

3 Agro EcoEnergy sues Tanzania after government cancels project due to concerns over human rights <https://www.business-humanrights.org/en/agro-ecoenergy-sues-tanzania-after-govt-cancels-project-due-to-concerns-over-human-rights-impacts> (Accessed 11 May 2019).

Despite the above stakeholders' acquisition of the land, as of July 2018, only small areas were developed. For example, TPA and EPZA have funding challenges and have not fully compensated villagers who gave up their land. Most areas owned by TPA and EPZA are still covered in bush and shrubs.

The district has often seen various actors come in and 'facilitate' LUP in the villages intended for investment or other purposes. However, often these actors, particularly investors and conservation organizations, promote their own agenda and priorities and influence the VLUP outcomes by using consultants, excluding groups from decision-making, accelerating the process and compromising its participatory nature.

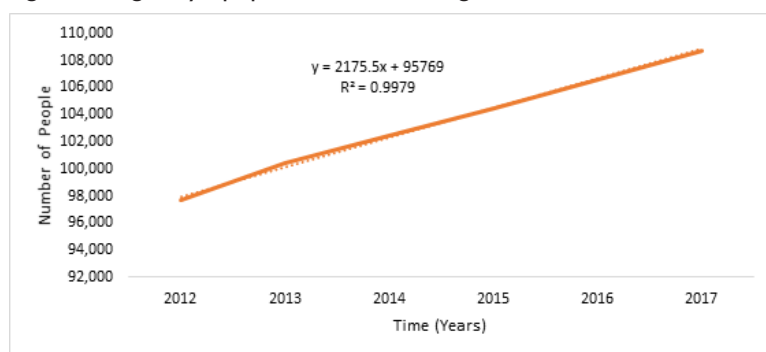
For example, in the development of WMA, seven VLUPs were supported. The VLUP exercise was purposely done to safeguard the WMA area and ensure its sustainability. The WMA provides a wildlife corridor from SANAPA to Selous Game Reserve. In addition, in the preparation of the Eco-Energy project mentioned above, the Eco-Energy company paid for LUP for some villages around the company's targeted land. According to our interviews with officials and members of communities in Chalinze and Bagamoyo, it was highlighted that the interests of the stakeholders who led and facilitated processes of LUP influenced the outcomes. As a result, some of the land uses have caused land use-based conflicts, for example, between villages and SANAPA because of poor participation of villagers. However, the whole process is now obsolete as Bagamoyo is transforming from district to township status. The WMA is already encroached and ongoing human activities threaten to fragment the ecosystem.

Further, around the Bagamoyo town area, due to administrative dynamics, the district authority is now partnering with private companies to conduct plot surveys. Plots are then being sold on the open market.

Economic issues

The economy in Bagamoyo is rapidly changing as the area is the target of increased investment from national government and other stakeholders. This is set to continue as the EPZ expands, Bagamoyo port is developed, the road through to southern Kenya is finalised, and the demand for agricultural products from nearby Dar Es Salaam increases. This will rapidly change what has been to date a relatively sleepy 'backwater' to an economic hub with significant impacts on other land uses in the area. As can be seen by Figure 1, the population in the district is already rapidly increasing.

Figure 1: Bagamoyo population—increasing trend

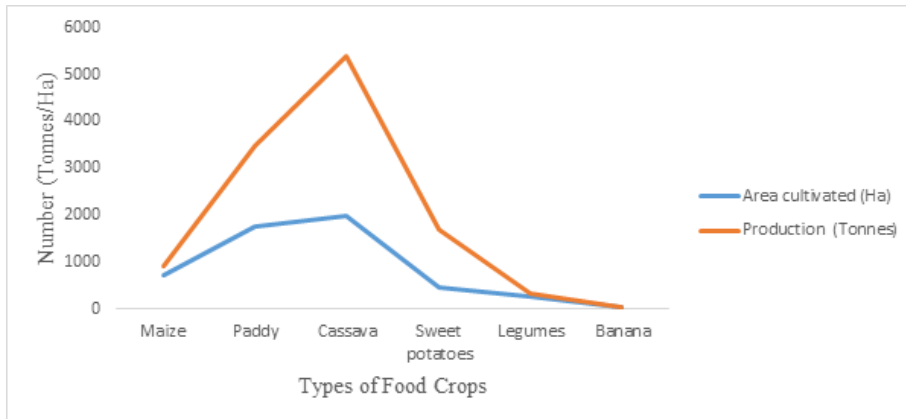


Source: National Bureau of Stastics (2012) in Bagamoyo investment profile (2018)

Agriculture

Agriculture in Bagamoyo is diverse and highly productive, playing a major role in feeding its population and, to some extent, the population of Dar es Salaam. For example, in 2016, Bagamoyo produced maize, paddy rice, cassava, sweet potatoes, legumes and banana as food crops (Figure 2). Cassava, paddy rice and sweet potatoes have high productivity in the area, needing only a small area to produce a substantial amount (Figure 2). It is difficult to turn such productive private land into pasture land without a significant compensation scheme.

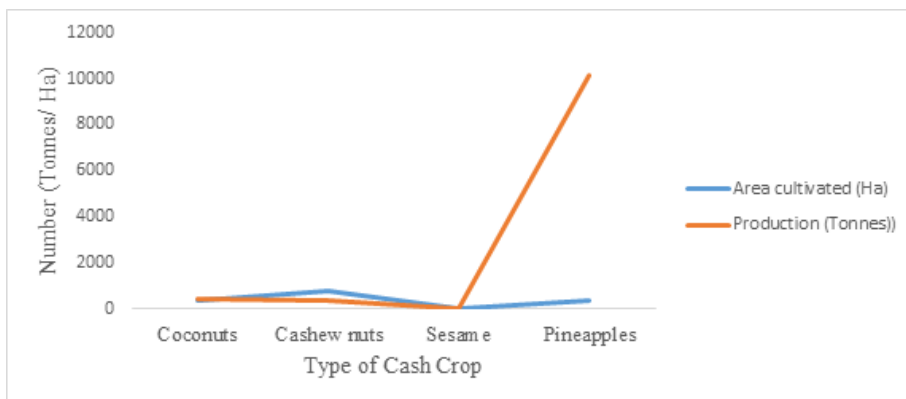
Figure 2: Bagamoyo food crop productivity, 2016



Source: Bagamoyo strategic plan (2016–21)

Bagamoyo district has also recorded cashew nuts, sesame, coconuts and pineapples as major cash crops. Though cashew nuts, sesame and coconuts have steadily fueled district earnings (Annexe I), pineapple productivity earns the district more income (Figure 3). The Bagamoyo area of Kiwangwa is famous for pineapple production.

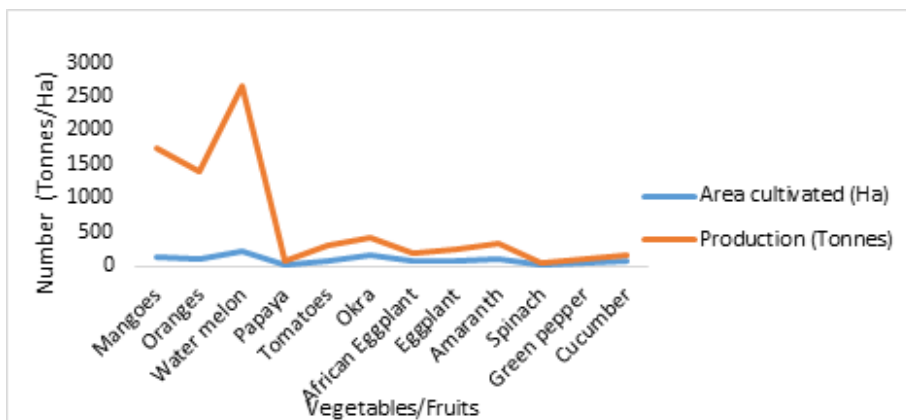
Figure 3: Bagamoyo cash crop productivity, 2016



Source: Bagamoyo strategic plan (2016–21)

Mangoes, oranges, watermelon and a variety of vegetables have also been recorded by Bagamoyo district (Figure 4). These crops stimulate household incomes and district council revenue (Annexe I). A boom in the hotel and tourism industry until early 2016 created jobs in fruit and vegetable production. Bagamoyo also exploited markets in Dar es Salaam.

Figure 4: Bagamoyo fruit and vegetable productivity, 2016



Source: Bagamoyo strategic plan (2016–21)

Like many Tanzanian districts, Bagamoyo experiences drought, leading to a scarcity of livestock pasture and water. However, with proper counter-strategies, the impacts of droughts can be minimized. The Bagamoyo strategic plan of 2016–21 highlighted several irrigation schemes with high potential (Table 3). According to the Bagamoyo investment profile (2018), the schemes have recorded high performance with the exception of RAZABA, Kitame and Bagamoyo Investment Development Project (BIDP) schemes. These schemes recorded low irrigation performance due to existing land-based conflicts in the areas. Development strategies such as the irrigation scheme need to properly allocate land for pastoral activities and/or routes where livestock can access water, especially during droughts and/or dry seasons if livestock is still to play a role in the local economy.

Table 3: Bagamoyo irrigation schemes

	Name of scheme	Area suitable for irrigation (ha)	Area irrigated (ha)	Area irrigated (%)
1	Kigongoni	200	200	100%
2	Makurunge A	200	200	100%
3	Makurunge B	500	500	100%
4	Dunda dam	50	50	100%
5	Mdeme irrigation scheme	50	50	100%
6	Turbam irrigation scheme	1,600	1,600	100%
7	Gama	500	300	60%
8	Bagamoyo Eco-energy RAZABA	23,600	3002	13%
9	Kitame	400	30	8%
10	BIDP	1000	72	7%

Source: Bagamoyo strategic plan (2016–21)

During interviews with Bagamoyo district senior officials, it was observed that Bakhresa & Company does not have clear plans for the future, and it is unclear how smallholder farmers will participate in the project compared to original plans shared with them. BEE had plans to include smallholder farmers in cane production to meet 40% of total production capacity. It has started to implement the plan, involving technical and political senior officials, in decision-making. However, it is still not clear if Bakhresa will improve the wellbeing of smallholders in the area. The lack of clarity signals that Bagamoyo district and higher authorities may be welcoming this big investment, which is unlikely to benefit smallholder farmers and pastoralists, but is likely to have significant impact on their access to land, water and other resources with competition for land only increasing (Chung 2015).

Livestock

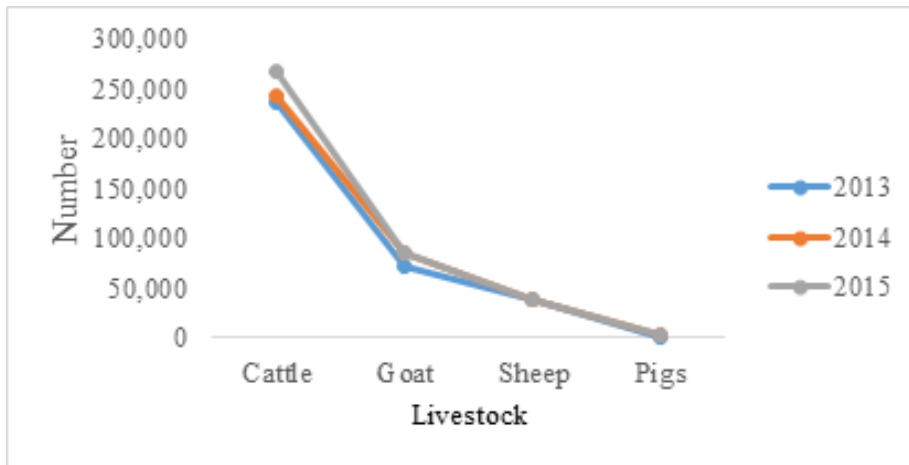
According to the Bagamoyo District Council's strategic plan for 2016–21, livestock is the key employer of people in the district (Bagamoyo District Council 2016). The strategy document describes livestock keepers as those 'who are engaged in small scale enterprises that are characterized by free range and tethering systems'. The plan further states that 'zero grazing is dominantly practiced for the project oriented enterprises' (Ibid: 46). Livestock keepers in the district keep local and crossbreeds of cattle for milk and meat production, sheep and goats, local and improved chicken for eggs and meat production.

The district plan further states that there has been no significant increase in livestock since the 2010s. For example, from 2013 to 2015, there was only a slight incremental increase of livestock from 2014 to 2015 (Figure 5). The unchanging number of livestock likely results from rapid population growth (Figure 1) and increased agricultural investment (Table 3) denying livestock keepers⁴ including pastoralists' suitable grazing areas. But, more importantly,

⁴ In this study, due to limited data and information from district offices, we were unable to establish disaggregated data on pastoralists, livestock keepers and agro-pastoralists as other previous studies have done. For example, an ILRI report established three categories of livestock production in the country: ranching, pastoralism (indigenous) and mixed pastoralism (agro-pastoralism) which account for about 4%, 16% and 80% respectively of the livestock production (cited in Mollé and Porokwa 2013:101). We recommend that future activities and studies aim to update the ILRI report cited above.

the introduction of bylaws and legislation curtails pastoralists' free movement with their livestock and/or requires permits to move with livestock. Where VLUPs have been undertaken, these have failed to provide adequate land for grazing of livestock found in those villages (Flintan 2014).

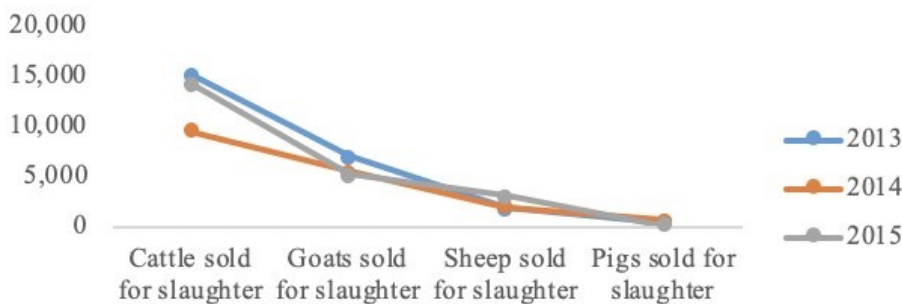
Figure 5: Bagamoyo stock incremental increase, 2013–15



Source: Bagamoyo strategic plan (2016–21)

Despite the above challenges, Bagamoyo pastoralists enjoy a strategic location in Bagamoyo district near Dar es Salaam and Zanzibar livestock markets. Pastoralists sell cattle, goats and sheep to both markets. They also secured a large market share from hotels and tourist markets but the Bagamoyo market is no longer lucrative, with the highest sale being in 2013 (Figure 6), and a slight decrease of cattle sales up to 2015. It is unclear if the decrease is due to a decline in livestock numbers or the declining hotel business resulting from the government's recent ban on hosting government workshops and conferences in private hotels (instead such events are now held in government boardrooms and institutional venues)—Bagamoyo used to be a favoured government workshop destination.

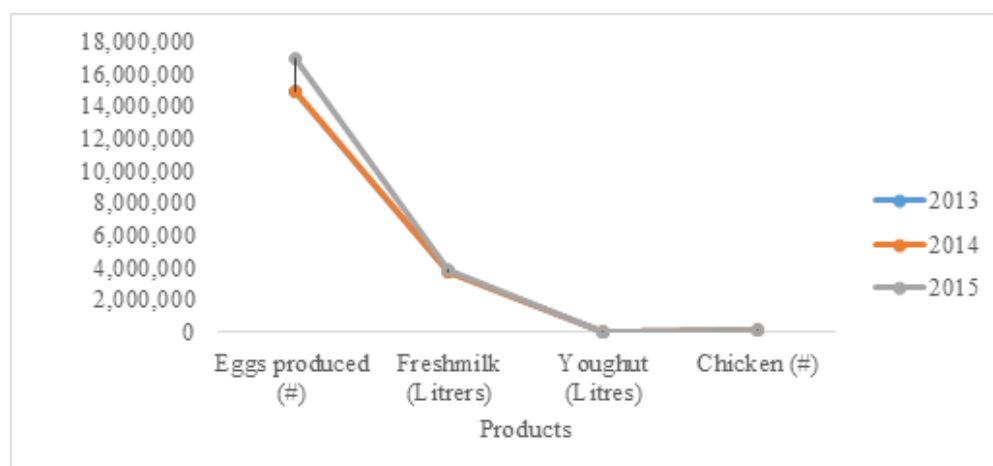
Figure 6: Bagamoyo livestock sale, 2013–15



Source: Bagamoyo strategic plan (2016–21)

In Bagamoyo district, poultry products are the leading source of food. The industry also targets increasing demand from hotels and Dar es Salaam; Dar es Salaam remains a stable market. Between 2013 and 2015, poultry production included chicken and eggs, while pastoralists provided fresh milk and yoghurt (Table 7). Eggs and fresh milk have greatly contributed to market share (Figure 7), demonstrating pastoralists' contribution to the Bagamoyo district economy. In addition, the district plans to harness more dairy and poultry products to increase the value (Annexe 2) and stimulate employment.

Figure 7: Bagamoyo sale of dairy and poultry products, 2013–15



Source: Bagamoyo strategic plan (2016–21)

Despite the economic contribution pastoralists make to the district and the district's plans to harness more from pastoralists, the district has not provided any substantial infrastructure to support pastoralism in the area (Figure 7, Annexe 2). For example, the district's investment profile recorded all the nonfunctioning dip tanks as government owned (Table 4). All functional dips are owned by the private sector, creating significant challenges and cost implications for pastoralists due to recurrent expenditure to maintain healthy stock.

Table 4: Bagamoyo dips

No.	Village	No. of dip tanks	Working	Not working	Reasons	Ownership
1	Fukayosi	1	0	1	Lack of funds for repair	Village government
	Fukayosi	1	1	0		Private
2	Kaole	1	0	1	Encroached by residence	Village government
3	Mkenge	1	0	1	Lack of funds for repair	Village government
4	Makurunge	1	1	0	-	Private
5	Yombo	3	3	0	-	Private
6	Kiromo	1	1	0	-	Private
7	Mapinga	3	3	0	-	Private
8	Zinga	1	1	0	-	Private
9	Kisutu	1	1	0	-	Private
Total		14	11	3		

Source: Bagamoyo strategic plan (2016–21)

Minerals and industries

The district is endowed with natural resources such as building sand and salt. Sand from Bagamoyo is largely used for construction work in areas like Boko and Bunju in Dar es Salaam. Figure 1 indicates that Bagamoyo has, on average, received 2,175 more people annually (refer to the slope of the equation in Figure 1 below). Kingani and Kitame areas in Kisutu and Makurunge wards are witnessing increased salt resource extraction.

Legal land issues

The NLUPC is by law the custodian of all LUPs. However, various stakeholders and/or institutions fund, facilitate and even carry out LUPs and tend to hold onto the maps of such plans because of lack of oversight, and poor coordination between them and the NLUPC. In Bagamoyo District, this situation has resulted in uncoordinated and confusing LUP processes. In addition, existing land and/or boundary conflicts in Bagamoyo demonstrate a lack of institutional coordination. The demarcation of pastoralists' areas and SANAPA, for example, illustrate coordination problems due to different laws governing different types of land and land use which result in conflicts.

In Tanzania, land is categorized as one of three types:

- general land, often including all public land that is neither reserved nor village land, except for unused village land;
- reserved land is all land under different types of protection; and
- village land, which generally refers to land within the boundaries of a village registered in accordance with the Local Government Act of 1982.

Each category is administered by different and often contradictory and/or overlapping legislation (TNRF 2012; Sulle 2017). While the district authority legally demarcated the areas in Makurunge and Fukayosi for pastoralists, these areas were previously in the possession of individual farmers. In order for these areas to be allocated for grazing purpose, the farmers previously owning the areas were to be compensated; however, this did not occur and the land remains under crop farming.

Technology and capacities

Bagamoyo district has appropriate human resource capacity. The staff are university graduates and post-graduates. However, the land department lacks appropriate software and hardware to facilitate LUP and storage of such plans. The lack of functioning global information system (GIS) acts as a daily challenge to district land officials. The lack of adequate facilities resulted in a myriad of boundary conflicts between Bagamoyo district and its neighbours, and between the district and SANAPA.

In addition, previous VLUP and its demarcation process involved a GN to declare areas for certain use. However, the old method did not establish beacons and therefore perpetuated overlapping boundaries. For example, NARCO land overlaps with Kidomole, Fukayosi and Mkenge village lands due to primitive old demarcation processes with no physical signs by which villagers could verify their borders and those of NARCO. The more recent use of global positioning system (GPS) has to some extent helped to resolve this problem in more recently established VLUPs.

Conclusion and recommendations

Focusing on key political, social, economic, environmental, legal and technological factors, the context for VLUP in Bagamoyo district was explored. The study found prior and ongoing initiatives supporting VLUPs to secure land rights of rural people and stamp out land-based conflicts among pastoralists and farmers in the district. However, the arrival of more pastoral communities and the ups and downs of hotel and tourism business in the district are slowly changing the structure of the local population and cultural patterns.

Because the district borders SANAPA and hosts a pristine beach, it is attractive to investors in hotels and real estate; the district continues to attract new investors from Dar es Salaam and elsewhere in the country as well as foreign investors in tourism, agriculture and real estate development. The arrival of investors and land speculators led to the haphazard sale of land by village governments which contributes to unregulated clearing of most of the natural forest and grazing areas. The district is awaiting implementation of mega projects such as the Bagamoyo Port and large-scale

sugarcane estates. All the development in the district is making Bagamoyo a boom town, and shifting local economies away from agriculture and livestock to other employment opportunities.

Bagamoyo district can no longer be a priority for the establishment of JVLUP because it is in the process of acquiring town council status. The change of the district council to town council will transform present villages in the district into streets, so few villages will remain; all land in the streets will be under the town council and will be governed differently to village land. Therefore, given the political, environmental, social and economic aspects of the district, the area does not look like a suitable candidate for JVLUP. It will rather likely have to adopt approaches such as zoning and/or a landscape approach which may allow the few remaining rangeland areas in the district to be connected to neighboring districts of Chalinze, Kibaha and Kisarawe.

2.3 Chalinze district

Introduction

Established in 2015, Chalinze district is the 'crossroads' between Tanga, Morogoro and Dar es Salaam, making it a strategic and commercial destination. The district receives its highest income from a bustling gravel industry, followed by livestock production including pastoralism. Crop farming, although undertaken by most inhabitants, does not generate major revenue for the district.

Currently, Chalinze's District Council works with several stakeholders implementing various development and environmental projects. The most important stakeholders in the district include Climate Action Network and the Landmark Social Organization. These NGOs help farmers and pastoralist communities understand climate change and initiate adaptation measures. Other stakeholders in the district include the Japan International Cooperation Agency (JICA), Seventh Adventist Church, Tanzania Social Action Fund, Tigo, USAID-Water Resource Integrated Development Initiative (WARIDI), Ifakara Health Institute and the World Bank. Stakeholders are working with the district to build more wells and build the capacity of water users at the village level. Moreover, with the financial and technical support from the Tanzania Business and Property Formalization Program (MKURABITA), the district council has constructed District Land Registries and Village Land Registries in the six villages of Masuguru, Kiwangwa, Msoga, Kihangaiko and Msinune (D.C. Profile 2018).

Weak social mingling between pastoralists and farmers in the district exists and necessitates the creation of social cohesion before JVLUP can be achieved. Social cohesion is important to normalize and initiate a functional grievance-addressing mechanism. The mechanism is important after VLUP is fully functional.

Political issues

As part of the Bagamoyo district, the Chalinze district received MKURABITA funds to conduct VLUP. Politicians supported the VLUP process because LUPs were viewed as a solution to a number of land-based conflicts in the district. Although the estimated cost of conducting a VLUP is about 10–15 million Tanzanian shilling (TZS), the district council continues to allocate money every financial year to achieve VLUPs. For example, in 2017–18, the council set aside funds to conduct VLUP in the Midukeni and Kikaa areas. As part of the efforts to realize these plans on the ground, ward councilors play a crucial role in awareness raising about the VLUPs, and associated benefits in their respective wards and the district at large. This leverage effort by politicians is an important aspect for future interventions.

Livestock officers and the DED were generally supportive of pastoralists and indicated the council's willingness to host pastoralists in the district for the next 20 years or so. The council officials believe that a combination of pastoralism in village areas and the development of modern livestock-keeping centres in the district provide a great potential for

livelihood improvement at the household level and income generation for the council. Indeed, as a newly established district council, Chalinze holds good potential to conduct proper LUP that supports pastoralist economic activities (Table 5).

Table 5: Chalinze district wards

No.	Ward	Potential change
1	Pera (Chamakweza)	
2	Bwilingu (Matuli)	These wards are dominated by pastoralists. The villages include Chamakweza, Matuli, Lulenge, and Mindu Tulieni.
3	Ubena (Lulenge)	
4	Lugoba (Mindu Tulieni)	
5	Kiwangwa	Pineapple farming area.
8	Msoga	Agriculture potential area.
9	Mbwewe	Agriculture potential area.
10	Mkange	
11	Talawanda	
13	Kimange	These are the wards which are resource conflict hotspot zones during the dry season. A significant number of Maasai and Mang'ati live in the Miono ward.
14	Miono	
	Vigwaza Msata	
15	Mandela	This ward borders SANAPA and experiences human-wildlife conflict at times.
16	Kibindu	Agricultural potential area.

Source: interviews (2018)

Social aspects

The main inhabitants of Chalinze district are the Kwere, Zigua, Maasai, Barbaig, and Pare people among other small immigrant groups. The Kwere and Zigua are the longest residing groups in the district. Maasai, Barbaig, Pare and other minority groups arrived more recently. Interviews with regional officers documented resource conflicts between farmers and pastoralists who are competing for water from two major rivers, the Wami and Ruvu, as well as land.

The district's community development department works with various groups including pastoralists. Its key objective is to ensure communities have stable livelihoods. During their meetings with communities, officials have observed that the Maasai women participate actively in social development projects. Officials facilitated training to ensure Maasai women engage in profitable handicraft businesses as an alternative source of livelihood. For example, the Maasai make rings and earrings and sell them at Chalinze Centre, the crossroad to Dar es Salaam, Morogoro and Tanga. This active participation of Maasai women in social projects is a model for women inclusion in future VLUP processes.

Chama Cha Wakulima Wa Pwani (CHAURU) is the local farmers association at Chalinze that presents complaints about conflicts between farmers and pastoralists, with competition especially tense during the dry season. CHAURU is an important stakeholder to work with in future interventions.

Environmental concerns

Environmentally, Chalinze boasts large areas that are not fully exhausted by human activities. District agricultural officers acknowledge that, although the district is challenged with a changing climate, bi-annual rains—*Vuli* and *Masika*—are the norm in the districts. The bi-annual rains present an opportunity for both farmers and pastoralist to boost economic benefits from agriculture and livestock, respectively. In addition, Chalinze district borders SANAPA which protects forests that in turn influences the local microclimate. The large Wami river crosses through the district before entering the Indian ocean. It runs alongside Ruvu river.

Chalinze is resource rich with great potential for both agriculture and pastoralism/livestock; however, this potential in addition to conservation and tourism efforts leads to land-use conflicts. The district has two types of conflicts: human-wildlife and resource based among inhabitants and investors (Table 6). While villages (Saadani and Miono) bordering SANAPA experience human-wildlife conflicts; riverine villages (i.e. Kidogozero and Kitonga) and other water catchment-rich villages experience conflicts between local land users (Table 2). It is anticipated that VLUP, and more specifically JVLUP, could help resolve these conflicts.

Table 6: Chalinze conflict types

No.	Conflict Type	Description
1	Human-wildlife	Villages near SANAPA such as Saadani and Miono experience recurring human-wildlife conflict. WMA is less secure and experiences a large influx of pastoralists from neighbouring districts of Mvomero, Handeni, Kilindi and as far as from Kilosa. Conflict exists over water use near Mindu-Tulieni dam between pastoralist and farmers.
2	Resources	Kidogozero and Kitonga villages recorded water resource conflicts. Chamakeza village experienced a serious land use conflict with Pingo village. Chamakeza is inhibited by large numbers of pastoralists and Pingo is inhibited by farmers. The conflict broke out after the pastoralists grazed in farms in Pingo village.

Source: interviews (July 2018)

Economic issues

Compared to Bagamoyo, Chalinze is a 'sleeping economic giant'. The district's potential is based on its strategic location between the upcountry regions and Dar es Salaam. For Chalinze district, quarry, pastoralism, agriculture and other service sectors remain the key income generating activities. The council's largest recorded source of income is from mining, followed by livestock, and then agriculture.

Agriculture

Chalinze has not done well with agriculture. As such, most food and cash crops are imported from nearby districts. Yet, the district has a high agricultural potential because of the availability of water for irrigation; the district also receives enough rain in good years/seasons to provide for a certain degree of rain-fed agriculture. According to district water officers, about 19 manmade dams, which already supply water to several villages, could support agriculture. However, few of these dams have cattle troughs for the livestock of pastoralists.

Table 7: Chalinze cash crops (in descending order of importance)

Rank	Cash crops	Farming areas
1	Cashew nuts	Vigwaza, Talawanda and Kiwangwa
2	Cotton	Miono, Kibindu and Mandela
3	Simsim	Chalinze wards
4	Pineapple	Kiwangwa wards
5	Rice	Vigwaza (paddy rice irrigation scheme exists)

Source: interviews (2018)

Livestock

From interviews with district livestock officers, it is clear that the district hosts significant amounts of livestock, though exact numbers are not clear. As in Bagamoyo, where VLUPs have been undertaken, these have failed to provide adequate land for grazing of livestock found in those villages (Flintan 2014). During the rainy season, pastoralist are

found in Chamakweza, Mindu-Tulieni, Ubena, Vigwaza, Mazizi and Talawanda. The dry season forces pastoralists to Ruvu, Buyuni, Kidogozero, Kitonga, Milo, Fukayosi, Kiwangwa, Mandela, WMA and SANAPA. Pastoralists use various routes to reach their dry season grazing lands usually found in river basin areas (Table 8).

Table 8: Pastoralist routes in Chalinze district

No.	Route name	Villages included
1	Mindu-Milo	Mindu, Pela, Pingo, Chamakweza, Vigwaza, Buyuni and Kitonga and Milo villages
2	Buyuni-Wami Mbiki/Mkoko/Fukayosi	Buyuni, Fukayosi, Mata, Masuguru, Kiwangwa, Kihangaiko, Wami Mbiki and Mkoko
3	Mindu Tulieni-Wami Mbiki	Mindu Tulieni, Pongwe Msungura, Pogwe Mnazi, Kimange and Wami Mbiki
4	Pongwe Kiona-Zigua Forest	Pongwe Kiona, Kimange, Mbwewe, Kwa msinja, Kibindu, Tulieni and Zigua Forest
5	Mandela-Gongo	Mandela, Handeni, Miono, Mkange, Matipwili and Gongo
6	Ruvu-Milo	Ruvu, Kidogozero, Kitonga and Milo

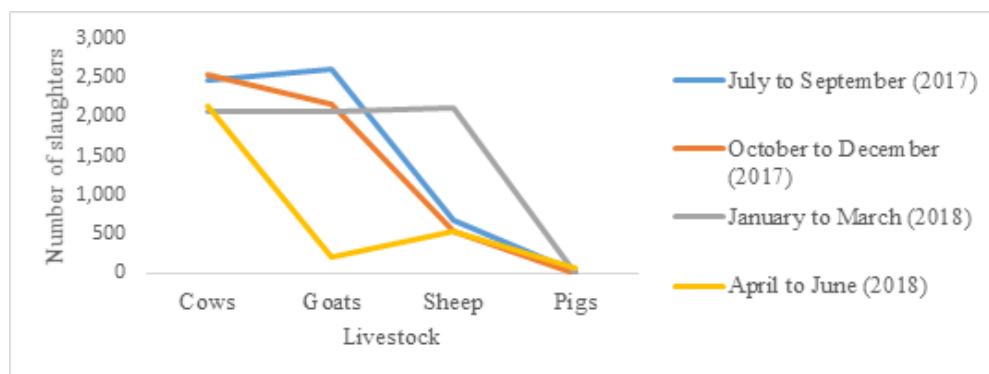
Source: interviews with district livestock officers, July 2018

Unlike Bagamoyo district, our analysis of the Chalinze District Council shows that some plans exist to ensure existing livestock markets are integrated in the VLUP in order to enhance livestock economic potential. Important livestock markets include Ubena, Chamakweza, Vigwaza, Ruvu, Mandela, Pongwe-Msungura, Kwa Msanja and Nadanya. Livestock officers advise pastoralists to use cattle open markets for economic gain and reducing the risk of massive cattle death during severe droughts. Combining reliable water-pasture-veterinary service delivery and markets are ideal for livestock route planning. It is recommended that SRMP articulate proposed routes to ensure that essential pastoralist services are available before implementing JVLUPs.

Figure 8 below illustrates the variety of livestock found in Chalinze district, mainly cattle, goats, sheep and pigs, with cattle being the main animals for slaughter. In the financial year 2017–18 cattle slaughters were higher than all goats, sheep and pig slaughters (Figure 8). Cattle and goat slaughters reflect the internal consumption of the meat in the district. Pigs are in low demand in the district, due to the area being mainly inhabited by Muslims, and also due to piggery still being in its infancy stage in the district.

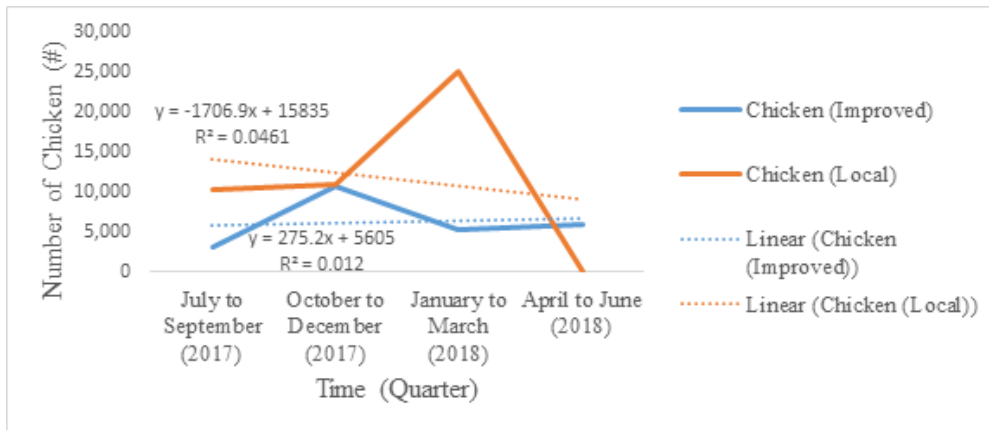
Figure 8: Chalinze annual livestock slaughter

Source: District Livestock Office reports, (2017–18); unpublished



The strategic location of the district favours chicken sales. Upcountry buses and lorry drivers stop over at Chalinze Centre for breakfast, lunch and dinner, which stimulated food-vending businesses in the area. Figure 9 below illustrates annual fluctuating slaughter of chicken varieties in the area. While local chicken show a decreasing slaughter trend annually, improved varieties of chicken indicate an increasing trend. This is due to the growth timeline differences of chicken varieties; Improved varieties mature in a short time compared with local varieties. However, the peak of sales of local chicken between January and March may be attributed to new year and Easter holidays, respectively.

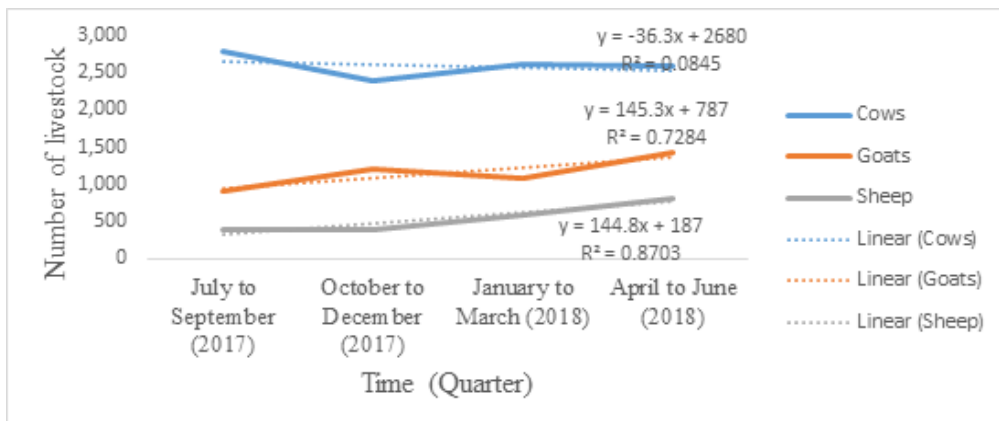
Figure 9: Chalinze chicken slaughter



Source: District Livestock Office reports (2017–18)

Sales data in Figure 9 is attributed to external market forces. Cattle continue to dominate the external market (Figures 8 and 10). Unlike the internal market, the external market (Dar es Salaam and Morogoro Town) is stable throughout the year (Figure 3; $R^2=0.084$; 0.72 and 0.87). As such, pastoralists in the district area are strategically positioned to sustainably benefit from external markets—an important factor to consider in planning and executing VLUP in the area. Nonetheless, Chalinze will, for the foreseeable future, remain a stop-over for livestock from other parts of the country that are being taken to Dar es Salaam.

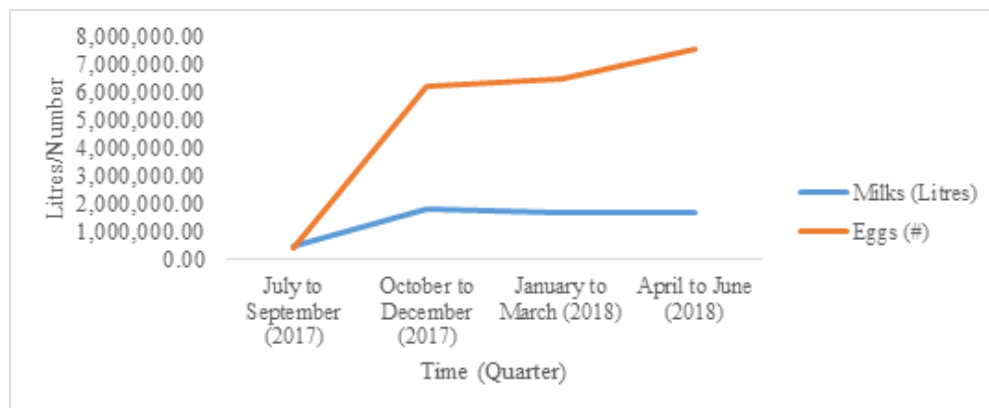
Figure 10: Chalinze annual sale of cows, goats and sheep



Source: District Livestock Office reports (2017–18)

The external market has also stimulated poultry and livestock markets, especially milk and eggs (Figure 11.) The sale of both milk and eggs peaks from October to June, with July to September recording slightly lower sales. The sales fluctuation may be attributed to cold weather in the district rather than changes in market forces.

Figure 11: Chalinze annual milk and egg sales



Source: District Livestock Office reports (2017–18)

Despite the potential, pastoralism faces many legal challenges in the district and the country. A senior district official admitted that, given the current national focus on individual land ownership, pastoralists face challenges; for pastoralism to function, legislation and institutional frameworks must recognize and protect communal land ownership, including pastoral grazing rangelands. The district council is ready to support and facilitate a meaningful participatory LUP approach for the benefit of all residents, especially pastoralists. Many district officials, including the DED, recognize the economic potential of pastoralism in the district.

Minerals and industries

The district's highest source of income is derived from gravel in the Msoga, Bwilingu and Lugoba areas. Chalinze is also the source of sand used in the construction industry in many areas surrounding the district. Sand is also found in the Msoga area. Additionally, water and agriculture officers highlighted that salt extraction occurs in Saadani villages. However, resource extractors and pastoralists experience conflicts over land use, as both parties struggle to maintain their interests on land and resources attached to land.

Table 9: Chalinze mineral extraction on site (in descending order)

Rank	Mineral	Extraction sites
1	Gravel	Msoga, Bwilingu and Lugoba
2	Sand	Msoga
3	Salt	Mkange (Saadani village)

Source: interviews (2018)

Due to its strategic position, Chalinze is home to several industries targeting potential markets within and around the district. Middle-sized production and processing industries include Twyford Ceramics in Pera ward, Sayona Fruits near Msoga and the prison ranch that hosts a number of livestock in the Ubena ward. A new cement factory is proposed in the Talawanda ward area.

Legal land issues

The Chalinze District Council has few VLUPs in place. Most LUP processes are still at the preparatory stage and lack implementation resources—especially funding. Further, a district land use framework is lacking, and land-based conflicts occur. To resolve these conflicts, the district council enacted bylaws that delineate dispute mechanisms such as 'special committees.' They also attempted to control pastoralist movements in the district. At the village level, the special committees conduct hearings and make decisions regarding conflicts based on village bylaws. There is also a special committee on land matters at the district level, which uses the district's bylaws. Courts also use the bylaws to

address land-based conflicts. The bylaws have eased the district work load in resolving conflicts but have restricted pastoralist movement in the district. It is critical to understand the necessary reforms to establish and safeguard rangelands and pastoralist livelihoods.

Absentee landlords pose another challenge in the district as they buy land then leave it undeveloped which returns to bush. Such areas are used opportunistically for livestock grazing. However, this has led to clashes between herders and the absentee landlords. To avoid such conflicts, the district enacted a bylaw to abolish absentee landlords. As such, any undeveloped land is legally deemed to be revoked and may be used for other purposes in the district. This has, to some extent, aided the district in reducing conflicts.

Technology and capacities

As a newly established district, Chalinze does not have adequate hardware nor software to implement VLUP, including GPS, GIS and printers and other equipment for planning and storage of LUPs. While more human resources are needed, the council has the advantage of an experienced land officer who, in the early 2000s, oversaw the World Bank-funded pilot project of land formalization in Mbozi district. This land officer has developed databases for various LUPs in place for Bagamoyo and Chalinze District Councils. He previously worked in Bagamoyo district and transferred to Chalinze when the Chalinze District Council was established. Regarding technology, the council will need more capacity building in terms of funds to purchase working tools. This kind of support will help in executing JVLUP but will also help reduce land conflicts in the district when LUPs are implemented.

Conclusion and recommendations

This study indicates that based on political, social, environmental, economic, legal and technological factors, the Chalinze district presents a great opportunity for implementation of LUP including JVLUP. The district hosts large open areas with reliable water sources and pastoralism is the second largest source of district internal revenue. Most pastoralists in the district legally obtained settlement permits and areas for grazing purposes. Moreover, the district council has vibrant district officials who acknowledge the contribution of the livestock sector. Ward councilors, who form an important political and decision-making body, actively participate in awareness raising with regards to LUP and conflict resolution in the district. The DC has set aside a budget to carry out two VLUPs and will increase the number of villages to include in LUP when district finances increase.

Given its strategic location at the junction between mainland Tanzania and Dar es Salaam, human population and industrial development are all increasing in Chalinze. This situation is likely to increase pressure on land and other resources, including pasture lands and water. Considerations for LUP in the district include demarcating a significant share for pastoral lands, since pastoralism will remain a key livelihood option for communities. A meaningful participatory VLUP will address land and water resource conflicts which intensify during drought years.

3 Morogoro region

3.1 Introduction

Lying at about 178 km from Dar es Salaam, Morogoro region covers a total of 72,939 km² or about 8.2% of the total area of the Tanzania mainland. The region is currently the most targeted for various land-based investments: agriculture, pastoralism, large infrastructure and industries. As a core national bread basket region, Morogoro hosts large-scale investments in agriculture that include sugarcane and rice estates in Kilosa, Mvomero and Kilombero districts. It hosts other large-scale investments in rice, teak timber production as well horticulture farming. Given its excellent weather conditions, the region also has large numbers of mostly traditional livestock. However, given ever-increasing demands for land by both pastoralists and farmers as well as more land allocation to protected areas and investment schemes, conflicts have been intensifying between pastoralists and farmers in the region.

These conflicts resulted in the proposal and/or implementation of various initiatives which have reduced land-based conflict levels compared to past years when violent conflicts cost human life and led to property and livestock destruction (URT 2015). Our interviews revealed that the key to conflict reduction was establishing special regional, district and village committees to deal with the conflicts at all levels. In addition, cattle branding either limited or curtailed free movement of pastoralists from one region/district to another. However, the branding of livestock cost pastoralists as every district and/or region determined cow branding prices. In some districts, pastoralists paid about TZS 500 per brand while in other places they were forced to pay up to TZS 5,000, with no or limited transparency on how the revenue was spent.

The region maintains a large number of pastoral communities. The regional administrators are currently working with different stakeholders to address land conflicts in the area. Major regional stakeholders include the Food and Agriculture Organization of the United Nations, participatory land use management team (PLUM), Mtandao wa Vikundi vya Wakulima Tanzania (MVIWATA), World Vision, JICA, USAID-Feed the Future, and Rice Post-Harvest Management and Market (RIPOMA). Stakeholders supported VLUP, farming, irrigation schemes and capacity building at different levels. The region plans to continue working with current stakeholders and to invite others to continue and improve the existing land conflict reduction initiatives.

According to interviews with regional officials, there are plans to conduct VLUP in four villages with persistent land use conflicts in Mvomero and Kilosa districts. The region has further instructed DEDs to construct livestock water facilities in their respective districts in order to reduce farmer-pastoralist conflicts which are rooted in resource competition, especially water and pasture.

Regional officials appreciate LUP initiatives aimed to end land use conflicts in their region. The regional commissioner and RAS (regional administrative secretary) sent official instructions and directives to DEDs on allocating areas for pastoralists and farmers. However, most productive land in the region is owned by a few often politically-connected and/or wealthy business people, living outside or within the region but away from their farmlands. As the population grows, farmers and pastoralists compete over the remaining land, and therefore, if land use is not well-implemented and managed, further conflicts could arise.

Despite its commitment to end land-based conflicts, the Morogoro region has limited financial resources to implement its plans. The regional officials interviewed appreciate initiatives of the Ministry of Lands and donors to implement comprehensive LUP projects including the Land Tenure Support Program (LTSP) supported by three development partners: The Department for International Development, the Swedish International Development Cooperation Agency and the Danish International Development Agency. LTSP is currently executed in the districts of Ulanga, Kilombero and Malinyi and the project largely focuses on VLUP and the certifying of 300,000 parcels of individual land titles in those three districts.

Since Mvomero and Kilosa districts are yet to be covered by any large-scale program on LUP and given the potential of the two districts to provide livelihoods in pastoral communities, substantial opportunity exists for VLUP.

3.2 Mvomero district

Introduction

Mvomero district is one of the seven districts of Morogoro region. It covers an area of 6,632.9 km² with a population of 312,109 people. The district is known for hosting large-scale land-based investments such as sugarcane, as well as for violent land-based conflicts pitting pastoralists against farmers. Previous research established that Mvomero, Kilosa and Kilombero districts in Morogoro region, where the highest sugarcane and rice production occur, are also the areas with the highest number of deaths, injuries and loss of property due to persistent fighting between pastoralists and farmers (Mwamfupe 2015; Massay 2017).

While the district occupies one of the most fertile areas in Morogoro region, most of these productive lands are in the hands of a few absentee landlords, specifically powerful and influential politicians and administrative bureaucrats. Interviews with various stakeholders in the district revealed that some of the absentee landlords own up to 2,000 ha of productive land per individual. As such, land access is highly politicized, monitored and controlled. Some of the district ward councilors have direct connections to politicians owning land and cannot make decisions that may go against the interests of the absentee landlords. Nonetheless, since the district hosts pastoral communities and the intention of the JVLUP is to ensure all land users have secure rights to land and other land-based resources, it is possible to execute plans to secure rangelands in the district.

Political issues

In the past, village-level politics played a large role in fueling village conflicts. District officials acknowledge that village leaders often allowed pastoralists grazing use in some villages without prior consent of villagers (usually obtained through village general assembly meetings). Often payments are made by pastoralists to village leaders to access grazing, for which they may or may not be given written permission. Sometimes through alleged corrupt means, pastoralists are presented with grazing areas away from the village settlement or farm areas with questionable rights of access. Pastoralists may then invite their colleagues from other areas, resulting in tense resource competition within host communities.

Interviews with district officials indicate a willingness to execute LUP in the district, and it is likely to get political support from the district council and subsequently, ward councilors. They explained that ward councilors only refuse to support projects which do not favour or fall in their respective wards due to resource competition. Nonetheless, officials explained that in the case of limited resources, the district's technical personnel stick to previously approved meeting minutes and strategic plans. This has been the predominant solution whenever disagreements occur regarding project implementation and could be used as the route for gaining support for JVLUP in the district.

Social aspects

While Mvomero district was originally dominated by the Luguru people, since independence, the district has seen immigration of other communities including the pastoralists—the Maasai and the agro-pastoralist Sukumas. However, with the presence of fertile land, and also as a means to protect their land, some Maasai are transforming into agro-pastoralists. This transformation of the Maasai community allow elders and women to remain in one area with permanent houses and wives practising agriculture, while the Moran (youth) migrate with the livestock inside or outside of the district.

To ensure smooth and progressive transformation among district inhabitants, the community development department is implementing various initiatives, including awareness-raising campaigns on modern livestock-keeping practices. Awareness campaigns have been conducted in Milela, Dakawa, Doma and Mkindo villages. The department intends to promote improved livestock breeding among the Maasai community for commercial purposes. Improved livestock breeds can produce larger quantities of milk and meat if they receive high-quality feed, however, they are usually less hardy, find it difficult to adapt to local climatic conditions and easily succumb to disease. They also require greater monetary investment in terms of feed, veterinary drugs and other care. Livestock officials themselves were undecided as to which livestock are better.

Albeit relatively small in number, as a result of these initiatives, an increasing number of pastoralists, particularly Maasai women, are selling milk as an alternative livelihood source. According to community development officers, the Tanzania Milk Board is planning to conduct hygiene training with pastoralists to improve the quality of their milk and other milk-related products (cheese, butter and yoghurt). This step towards milk value addition initiatives in the district coincides with the current government promotion of 'industrialization'. Existing district projects among pastoralist communities include village community banking, milk processing and marketing, handicrafts and food vending.

Environmental concerns

Apart from plenty of fertile land, Mvomero district has both natural and artificial water sources. Stakeholders involved in water development include, iWash, the Lions Club, USAID-WARIDI program, the Methodist Church of Tanzania and the World Bank. Natural river water sources are located in Dibati, Tuliani, Kigugu and Kwa Dole villages. Mountain catchments include Mgeta, Waangai and Bumu. Therefore, the district environment under normal circumstances provides a sufficiently large catchment area to supply enough water for the district.

During the dry seasons, pastoralists are forced to search for water and pastures within river basin areas, which are full of irrigation schemes and farmlands. Unfortunately, because of poor planning, there are either few or no livestock routes that allow pastoralists to access water in these cultivated areas. Therefore, in the search for water, pastoralists must often move livestock through farmlands or irrigation schemes resulting in conflicts with farmers. In Mvomero district, wards that recorded pastoralist-farmer conflicts include Hembeti, Dihombo, Mkindo, Kibati, Lubungo, Vianzi and Turiani. Under normal climatic conditions, pastoralists are found in Dakawa, Doma, Mkondo, Hembeti, Melela, Mlali, Mvomero, Kanga, Mhonda (very few) and Lubungo villages. Further research is required to understand the environmental, socio-economic and political issues at village levels.

The district is also working with conservation, agriculture and land-use development partners. These include the Tanzania forest conservation group (TFCG)-Mkaa Endelevu Program, Morogoro Environmental Conservation, Adding Value to the Arch, Eastern Arch Mountain Conservation Endowment Fund, MVIWATA, RIPOMA, Sustainable Agriculture Tanzania SAT and the Sustainable Land Use Management project which support the development of a district land-use framework.

In addition, the district borders and hosts several conserved and protected areas such as WMA, and district and national forests. The hilly terrain creates physical barriers that might hinder smooth implementation of LUP in the district, due to the difficulties in climbing the hills and installing beacons on natural features.

Economic issues

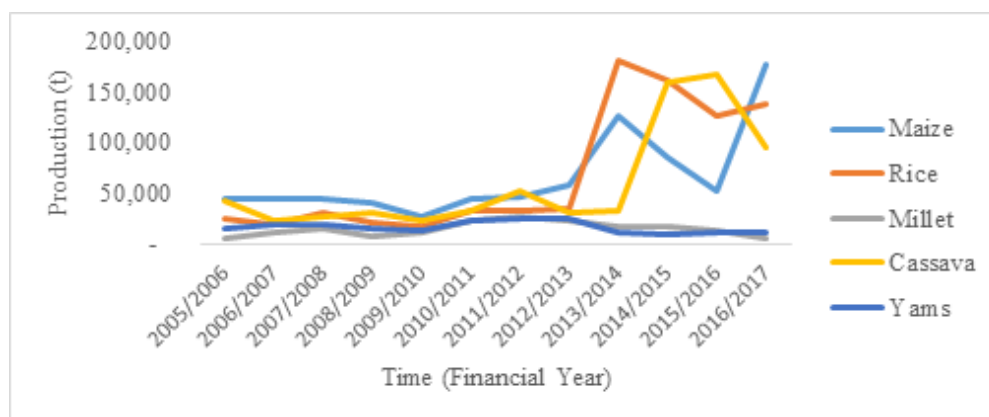
Mvomero boasts investment potential in agriculture and agro-processing, livestock, tourism and related services, mining, and financial services. District officials explained that their focus is on promoting direct investments in the above, as well as processing local produce and creating trade and business links between local producers (including farmers and pastoralists) and domestic and external markets. Indeed, large quantities of food and cash crops, an abundance of livestock and a hospitable population in Mvomero district provide opportunities for medium- and large-scale processors to invest in the district using readily available raw materials.

Agriculture

In Mvomero, agriculture is the leading income generator. District records show that about 11,508 ha of land is under agriculture cultivation, including maize, rice, horticulture and sunflower (Table 10). Maize and sunflower are interchangeably grown as communities adopt mixed farming. The dominant crops in the district are maize and rice in terms of land size under cultivation. Supporting this production are large farms in Mtibwa and Dizungu, and large irrigation schemes at Dakawa, Luhindo and Kigugu.

From 2005 to 2013, Mvomero production was less than 50,000 tonnes (t) of each of the commercial crops, but this situation changed in 2013 (Figure 12). The district agricultural officer acknowledges that the incremental increase in production of up to 150,000 t for each crop post-2013 is due to the establishment of large irrigation schemes in the area (Figure 12). It should also be noted that rice is a water-loving crop and its significant contribution to food production is tied to functioning irrigation schemes in the area. The cassava production incremental increase is associated with higher demand (yet fluctuating) markets in Dodoma and Dar es Salaam.

Figure 12: Mvomero crop production trend



Source: Mvomero agriculture department (2018)

Livestock

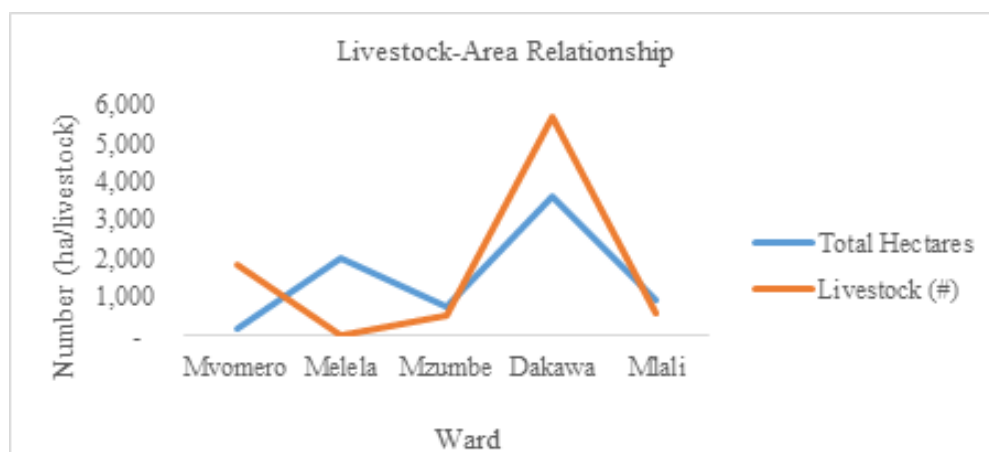
Livestock is the second largest economic activity in the district, as illustrated by the structured livestock markets found there. The district established fee collection mechanisms via electronic devices to efficiently collect and monitor revenue in the livestock markets. Public markets (*minada*) exist at Mkombani, Mkongeni and Melela. Most pastoralist markets operate on weekends. Wholesale buyers from Dar es Salaam, Dodoma and Morogoro Town have the same opportunity for purchasing. The economic potential of pastoralism in the district is an important, convincing factor for the establishment of JVLUP in the district.

Unlike Bagamoyo district, Mvomero invested in livestock production infrastructure. The district water engineer indicated that the district has constructed cattle troughs in Hoza, Salawe, Hembeti and Kwa Dori villages. The cattle trough found in Babati Lukengo and Kwa Doma village are not functional but plans for repair are underway. The water engineer also said that three more water projects are planned in Lubungo, Kihondo and Vianzi villages.

In addition to the planned training for Maasai women on hygienic milk processing for local consumption mentioned above, agricultural officers indicated that the district has further plans to incorporate the country's industrialization policy for livestock in the area. The district proposes to establish Mbulu Hill meat industry and the Tanga Fresh Company using its milk storage car tanks. The district is already collecting milk from livestock keepers in several stations and the Tanga region hosts major processing factories for Tanga Fresh Company.

In Mvomero district, the Dakawa ward hosts the largest number of livestock and the area is designated for livestock activities (Figure 13). Other livestock-hosting wards include Mvomero, Melela, Mzumbe and Mlali. Dakawa supports traditional pastoralist and modern sedentary private livestock keepers, while the other wards are home to a small number of pastoralists. Therefore, for planning purposes, Dakawa could be a strategic area for developing JVLUP in the Mvomero district.

Figure 13: Livestock-area relationship



Source: District Agriculture department (2018)

Legal land issues

In the past few years, the local government implemented various bylaws from the village to district levels to restrict free movement of livestock, at times at the expense of pastoralism and pastoral communities. Two major interventions are responsible: (1) enacting village bylaws that restrict pastoralists moving livestock from one village to another and (2) branding livestock to mark the original district of residence. The bylaws are monitored by village peace committees, while branding is a national initiative used to identify and track livestock movements in the country.

Interviews with district agricultural officials revealed conflicts in thinking and priorities in relation to land governance and LUP. For example, district officials insist that individual titling among pastoralist communities is the solution to land-based conflicts; however, the pastoralists want the recognition and protection of their communal lands, believing that individual titles will not facilitate a pastoral livelihood system.

Unfortunately, pastoral communities' resistance to individual titles (such as found in Hembeti village) is translated by district officials as resistance to progress. As such, if JVLUP interventions were to be carried out in the district there is need to first improve understanding of pastoral livestock systems, the importance of collective tenure and governance to facilitate such systems, and the role of JVLUP to support this while also resolving land use conflicts.

District officials also mentioned deliberate steps taken by villagers to exclude pastoralists from VLUP processes. Examples were given from Doma village where village meetings were deliberately arranged on market days when

pastoralists are busy and village leaders have failed to disclose meeting dates to pastoralists. Farmers are not only biased against pastoralists generally, but also argue that if some land is allocated to them for grazing then the pastoralists will invite in others from outside the district creating further pressure (and conflict) on land use. This situation denies pastoralists opportunities to negotiate grazing land, routes for their movement and access to water during the planning process. This has meant that land has not been allocated for grazing despite the knowledge that a significant number of livestock are in the villages/district (interviews, district agricultural officials August 2018).

Technology and capacities

Previous support from land stakeholders has not been enough to build up the capacity of the district in terms of skills and equipment/technology to allow them to carry out VLUP. The district needs extra computers and other hardware to undertake different tasks associated with LUP. Further, the district needs transport to conduct VLUPs in the field. Software and GPS are currently inadequate at the district level.

The district also requires more funds to capacitate district departments to implement livestock and agriculture VLUP-related activities. Capacity-building is needed at both the district and village levels. At the district level, departments need to understand different types of land formalization and what they mean to various groups, including pastoralists. At the village level, the village executive officers (VEOs) are the enforcers of the VLUP, and they need to understand the basics of enforcing rules and legislation guiding LUP.

Conclusion and recommendations

In Mvomero district, pastoralism is the second largest income generating activity and the single most important livelihood option for pastoral communities. However, Mvomero district is a politically sensitive area with regards to LUP, due to the presence of politically influential absentee landlords, the predominance of farming and a lack of understanding regarding the needs and contributions of pastoralist livelihood systems. The district has for the past few years recorded high levels of land-based violence, but, through various strategies and stakeholder commitments, conflict levels—especially between farmers and pastoralists—have been greatly reduced. JVLUP could play a role in further reducing conflicts while facilitating a functioning pastoralist livelihood system.

With Dodoma City now hosting all government offices and Mvomero district position in the middle of the highway from Dar es Salaam to Dodoma, the district is experiencing increasing, diverse immigration. With likely growth in competition for land and other resources, district officials are committed to supporting LUP. Therefore, Mvomero district remains a potential area for JVLUP despite the challenges that exist there. In addition, there are at least four villages which are dominated by pastoral communities interested in the securing of communal land rights instead of individual titles on land.

3.3 Kilosa district

Introduction

Established in 1926 in east central Tanzania, Kilosa district is one of the seven districts in the Morogoro region. It is about 300 km west of Dar es Salaam and covers a total area of 12,393.7 km² (i.e. 17% of Morogoro region). The district borders Mvomero district in the east, Kilombero district and Iringa region in the south, Gairo district in the north, and Mpwapwa district in the west.

Livestock keeping is a major economic activity undertaken in the district, and includes the keeping of cattle, goats, sheep, pigs and poultry. The activity is chiefly performed by Maasai, Barbaig and Sukuma tribes who moved to Kilosa district from other regions. It is said that about 483,390 ha is suitable for grazing, out of which 93,792 ha have been affected by tsetse flies, and as a result, no pastoralists graze in this area. The carrying capacity of the suitable area is 192,956 ha livestock (with an estimated carrying capacity of 2.5 ha per one cattle) (URT 2016).

While conflicts between pastoralists and farmers declined in recent years, the district was one of the hotspots for farmer–pastoralist conflicts including the violent killing of 38 farmers on 8 December 2000 (Benjaminsen et al. 2009). In Kilosa and many other districts where conflicts between pastoralists and farmers are rampant, the core causes are linked to political ecology factors: land tenure policy and laws, agricultural policies and rampant corruption among public officials and the society at large (Ibid; Sulle 2017). Also, continuing fights between pastoral and farming communities in Kilosa are partly due to the inefficiency of the dispute settlement framework and shortage of land to meet the demands of the competing users (Tenga and Mramba 2015). Kilosa has only recorded 689 Certificates of Customary Right of Occupancy, 73 land transfers, and 1 notice for land transfer (Tenga and Mramba 2015). Most pastoralists live with crop farmers in mixed villages, although there are also entirely pastoralist villages (e.g. Parakuyo and Mabwegere). Kilosa is one of the livestock catchment areas with potential for investment in large-scale grazing (URT 2011). The overall assessment categorizes Kilosa as having high potential for JVLUP.

Political issues

Kilosa is one of the most sensitive districts politically in relation to land use because of its history of pastoralist versus farmer land use conflicts. Political and administrative personnel have to varying degrees been involved in the conflicts: one top district official admitted that village government leaders have taken bribes from various sides that have influenced decisions and pitted one group against the other, fueling the conflicts. The influx of pastoralists pushed from other areas is a relatively new phenomena and the district is finding the situation hard to handle without a plan to accommodate pastoralists in the district.

Conflicts between farmers and pastoralists escalated from the 1980s until the 2010s. A community development officer recalled one event well-publicized as the ‘spear shooting through the mouth’ conflict in the 2010s. He stated that following these violent conflicts in the district, the president and his aides changed all senior district administration officials (DC, Organized Crime department officer and DED) and other members of district peace and security committees. Since then, the district established several initiatives to address root causes of farmer-pastoralist conflicts and the measures seem to have significantly minimized these conflicts (interview August 2018).

Information provided by the district suggests that land under conflict is minimal compared with land under agricultural, livestock and industrial development. However, the amount of land under revoked status highlights district and national initiatives to eliminate absentee landlords, who are another source of conflict in the area. The district administration is also taking steps to identify the land under ‘Abandoned/No official record’ before reaching the final stage of proposing revocation. However, what is not clear is to what degree pastoralists would agree with such statements that conflicts have reduced and to what degree they are happy with the outcomes. More often than not, though it may seem to have been resolved on the surface, underlying deep-rooted causes still exist including marginalization, biases, lack of tenure security and lack of participation in decision-making. It may well be the case that

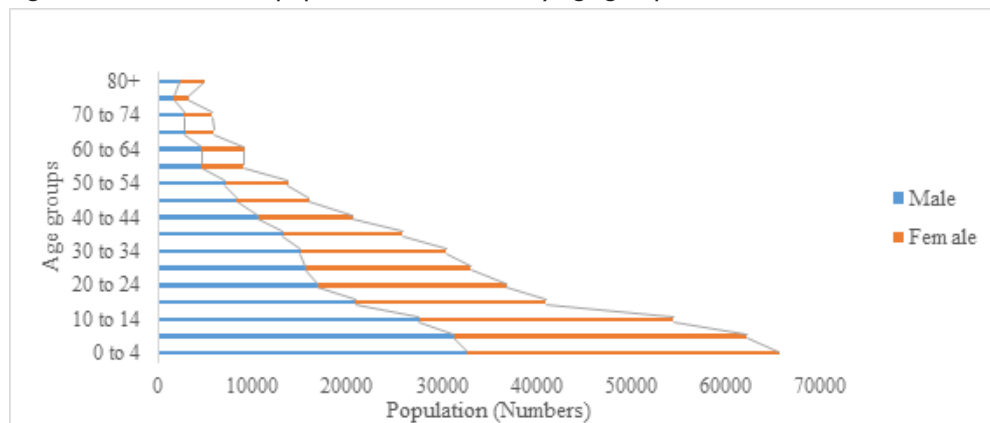
pastoralists have just been shifted/pushed elsewhere and their problems with them. This requires further investigation before LUP can occur.

Social aspects

Kilosa district is comprised of large farms, including Sisal Estate at Kimamba. According to the district community officer, the immigration of farm workers to obtain employment on these plantations is considered the origin of today's heterogeneous communities living in Kilosa district. This includes people from Sukuma, Hehe, Ngoni, Waha, Gogo and India.

Currently, the district is experiencing high population growth. The young (aged 4–14 and 15–35) represent the highest numbers of the population (Figure 14). As the population ages, land pressure will increase.

Figure 14: Kilosa district population distribution by age group and sex in 2018



Source: Kilosa socio-economic profile (2018)

District officials reported that the existence of pastoralists in the district is due to its strategic location as a livestock corridor which allows the movement of pastoralists and their livestock from other parts of the country. The most common movement is from the north (Arusha and Manyara) – Kilosa – Mvomero – Morogoro Rural – Chalinze – Kibaha – Bagamoyo to southern-Tanzania. The movements are directly supported by district resources such as pasture and water-rich.

According to the district community development officer, Kilosa district pastoralists are wealthier than farmers and therefore farmers need a greater economic boost than pastoralists. He said pastoralists have large herds of cattle and can manage their life without any significant help, so community development projects focus more on farmers than on pastoralists. The district supports community development projects such as carpentry, welding, masonry, coloring compressor machines and grinding machines for small or medium enterprises.

Additionally, district officials observed that pastoralists and farmers have different perspectives on introduced development projects. For example, while farmers exhibit a full and participatory response to every project, pastoralists largely accept only those projects that have clear direct benefits to them.

Environmental concerns

Interviews with district officials revealed that Kilosa has 194 farms, 32 permanent rivers, (including Rudewa, Kidoli and Kisanga rivers), and a total of 58 river streams (Annexe 2). Climatic changes have yet to affect the district's environment and as such, it remains the 'last resort' for pastoralists from Tanzania Lake Zone, particularly Shinyanga and Simiyu regions. This has increased pastoralism movement in the area. The district is also near Selous Game Reserve.

The district has fertile land with alluvium soil characteristics. The Ruaha and Kidodo rivers have up to five streams, whereas Berega, Kisanga and Ruhembe rivers have up to four streams (Annexe 2).

The important stakeholders working with Kilosa district include TFCG-Mkaa Endelevu Program and Women poverty alleviation in Tanzania (WOPATA). TFCG-Mkaa Endelevu Program aims to minimize and encourage sustainable use of forests. TFCG and WOPATA supported VLUP in villages such as Ulaya, Chabima, Kisongwe and Ibingu (Table 10). Other stakeholders include World Vision, USAID-WARIDI and Alliance Pure Water. The latter supported water programs in the Kilosa district.

Table 10: VLUP villages supported

No.	Village	CCROs	Funding source
1	Mvumi	1,315	MKURABITA
2	Magubike	1,246	
3	Kidogobasi	255	
4	Kihelezo	218	
5	Kitete Msindazi	667	
6	Ruhembe	230	
7	Chabima	10	TFCG
8	Kisongwe	10	
9	Ibingu	9	
10	Ulaya Mbuyuni	120	
11	Kigunga	67	
12	Rudewa gongoni	150	WOPATA
Total		4,147	

Source: Community development department (2018)

MKURABITA is another program that leveraged district initiatives in VLUPs (Table 11). According to the community development officer, MKURABITA carried out VLUP in Mvumi, Magubike, Kitete-Msidanzi and Kidogobasi villages (Table 11). Agriculture officers acknowledge that in these villages, conflicts are still observed because MKURABITA did not employ community planning and implementation of VLUPs.

Furthermore, the district wildlife officers emphasized that MKURABITA VLUPs did not consult the wildlife unit for identification of the wildlife corridors and buffer zones, which resulted in human-wildlife conflicts in the areas. The areas prone to human-wildlife conflicts are presented in Table 11 below.

Table 11: Wildlife corridors in Kilosa district

No.	Wildlife corridor
1	Ihume, Mikumi to Pala Ulanga Forest Reserve
2	Malolo-A, Ruaha National Park to Pala Ulanga Forest
3	Malolo-B, Udzungwa to Pala Ulanga Forest
4	Mikumui Parakuyo, Mkata ranch to Selou
5	Parakuyo, Msowelo to Rubeho mountains

Source: district wildlife officer (2018)

Economic issues

The natural resource wealth of Kilosa district is exceptional in many ways. Its water-rich fertile soil is suitable for a variety of crops and livestock grazing. It hosts large-scale estates in sisal and sugarcane, and large-scale areas under conservation (Mikumi National Park and many national forests).

Agriculture

The district has 536,590 ha suitable for agriculture, 483,390 ha under natural pasture, 323,000 ha dedicated to Mikumi National Park, 869,263 ha of forests, and 14,420 ha of urban areas, water and swamps (URT 2016). According to district agriculture officers, basins and irrigation schemes are targeted by pastoralists because they have reliable water sources throughout the year. The district potential for both pastoralists and farmers create resource conflicts, with district agricultural officials often receiving complaints from farmers about pastoralists grazing on their land; some wards receive more complaints than others (Table 12).

Table 12: Irrigation schemes and areas with pastoralist versus farmer conflicts

	Ward	Description
1	Ruvungu	
2	Malangali	
3	Dodoma Isanga	All these wards are located in and around river basins (there are 32 permanent rivers in Kilosa district). Pastoralists prefer these areas due to available reliable water and pasture land throughout the year.
4	Zombo Ulaya	
5	Mabwegere	
6	Luhembe	
7	Malolo	
8	Lumuma	
9	Kilonga	These wards have irrigation schemes. The schemes attracted pastoralists because (1) they have water available through the year and (2) feeding is available from agricultural post-harvest waste such as the remains of paddy. Unfortunately, in all these schemes, there is a lack of infrastructure for the pastoralists including routes to access water and pasture.
10	Chanzulu	
11	Illoga	
12	Ludewa	
13	Muumi	
14	Msowero	

Source: district agriculture officers' interviews 2018

The second category of areas that attracted conflicts are border conservation areas and other districts including Malolo, Lumuna, Mamboya, Berega and Magole (Table 13). The district agricultural officers said that pastoralists cross district borders in search of grazing land and water. However, further analysis is needed of this reported activity.

Table 13: Border areas with conflicts

Malolo	
Lumuma	Borders other districts and therefore causes chaos during migration. The areas present a continuous flock of green pasture.
Mamboya	
Berega	
Magole	
Luhembe	This is near the national park border and has less influx of livestock in Kilosa district.

Source: district agriculture officers' interviews 2018

It was noted that during the dry season, some pastoralists use forests as refuges. For example, the district agriculture officers mentioned the use of Ukwiva and Chanzulu forests by Kilosa pastoralists. Forest use has always inconvenienced other central government authorities, such as Tanzania forest services (TFS). The district agricultural

officer highlighted other reliable pasture areas dominated by pastoralists during the dry season, including Kiwago, Lumuma, Ulaya, Kisanga, Mabwelewele, Malolo, Ludewa, Msowelo, Mchazolo and Muhena.

The government is introducing more agricultural support programs such as the Agriculture Sector Development Program II. The program aims to strengthen district irrigation infrastructure and food reserves, and emphasizes irrigation schemes as important for food security. However, the program has not clearly stipulated pastoralists' needs, for example, demarcating water and grazing areas within irrigation schemes. As a result, as more irrigation schemes are put in place, conflicts will increase because pastoralists will be forced to cross farmlands as they search for pasture and water.

Kilosa district is the home of substantial sugarcane production (Table 14). Between 2010 and 2015, the district recorded 672,562.40 t of sugarcane produced (Table 15). The sugarcane feeds into the sugar processing industry, owned by the Illovo Company, which also employed smallholder farmers to grow sugarcane. Other cash crops in the district include onion, tomato, Simsim and cotton. However, due to the 'Illovo readymade market', sugarcane hugely out-performs other cash crops.

Table 14: Kilosa cash crop production, 2010–15

Cash Crop	Annual average production (t)	Percentage annual production
Sugarcane	672,562.40	90.14%
Onion	32,297.40	4.33%
Tomato	15,091.20	2.02%
Sunflower	11,012.69	1.48%
Coconut	7,216.00	0.97%
Simsim	6,582.87	0.88%
Cotton	1,377.82	0.18%
Total t	746,140.38	100.00%

Source: district socio-economic profile (2018)

Dominant staple food crops in the district include maize, sweet potatoes and rice (Table 16). Paddy rice is grown in irrigated and highly water reliable areas; cassava and sweet potatoes are grown in areas with less reliable water. Due to its one season dry weather road, crops are mainly used locally.

Table 15: Kilosa food crop production, 2010–15

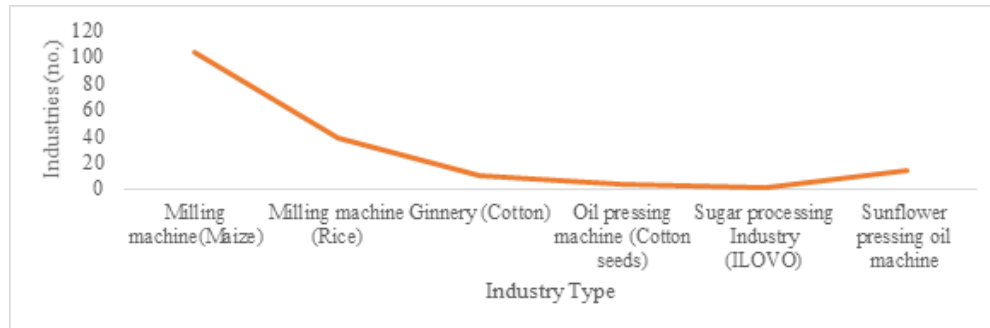
Food crop	Average annual production (t)	Annual production (per cent)
Maize	142,525.80	37.26%
Sweet potato	82,071.00	21.45%
Paddy rice	78,977.20	20.65%
Cassava	62,184.80	16.26%
Beans	12,918.60	03.38%
Millet	3,522.20	00.92%
Bulrush millet	346.80	00.09%
Total	382,546.4	100.00%

Source: district socio-economic profile (2018)

The district socio-economic profile presents a variety of existing irrigation schemes. From the numbers, it looks like the district has both high performing (Lumuna, Ilonga, Munisagara, Mwega and Kidayi) and poorly performing irrigation schemes (Madudumizi, Lumbiji, Msimba and Ludewa) (see Annexe 3). The poor performing irrigation schemes only have 7–9% under cultivation, i.e. 91–93% of the area is not used.

The presence of processing mills in Kilosa district illustrates steps taken to address commodity value addition. Existing processing industries include maize and rice milling machines, cotton ginnery, cotton seed and sunflower pressing machines, and the sugar processing industry. However, maize and rice milling dominate the area to meet internal food demand (Figure 15).

Figure 15: Industries in Kilosa



Source: District socio-economic profile (2018)

Livestock

Interviews with livestock officers indicated that villages share grazing areas in the Kilosa district (Table 16) but the areas are not formalized, which results in border-resource conflicts. This would be a suitable entry point for JVLUP.

Table 16: Villages sharing grazing areas

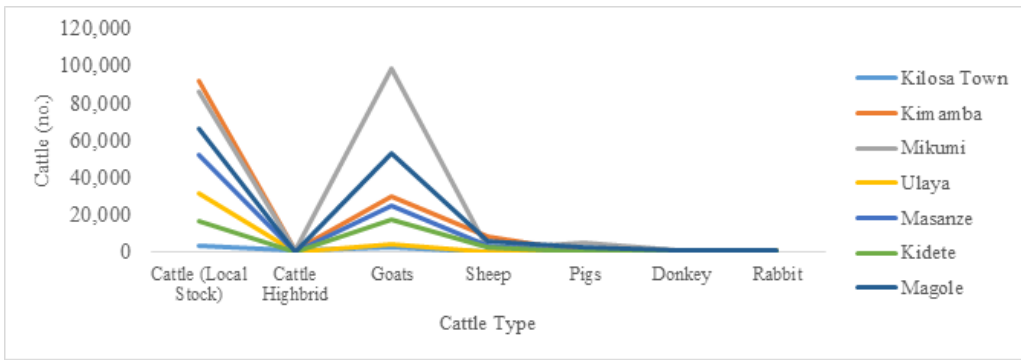
No.	Village sharing grazing areas
1	Changarawe and Zomba
2	Kilangali and Kivungu
3	Malui and Kivungu
4	Mbigili and Mabwegele
5	Mabana and Mabwegele
6	Mfuru and Mabwegere
7	Ludewa and Lumbiji

Source: district agriculture officer (2018)

The standard gauge railway (SGR) crosses Kilosa district. The consultants observed Yepi Merkez, the company constructing SGR in the area. The company is implementing the project from Dar es Salaam to Makutopora area in Dodoma. Yepi Merkez is also quarrying gravel in Kilosa to feed SGR project needs. The presence of the SGR affects pastoralist movements in the district.

Figure 16 below shows cattle distribution in Kilosa divisions. While Kimamba and Mikumi divisions have the highest number of cattle (local stock) and sheep, Kilosa Town and Kidete have the lowest. Kilosa Town is the headquarters of the district, with a high population and therefore is expected to host a low number of local cattle. Additionally, Kilosa recorded very low numbers of improved cattle, sheep, pigs, donkey and rabbit; local cattle dominated the Kilosa divisions.

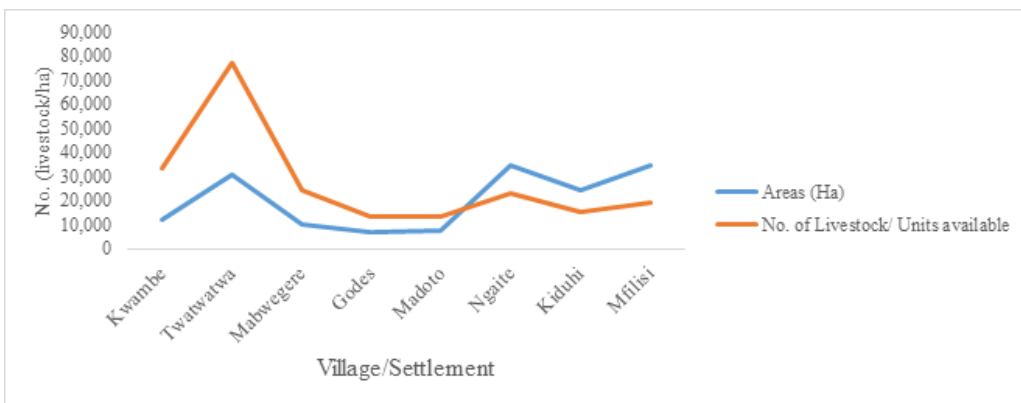
Figure 16: Cattle distribution in Kilosa divisions



Source: District socio-economic profile (2018)

The district’s soil fertility and water availability allowed pastoralists to host cattle in smaller areas where the livestock population is slightly higher than is usual in other villages. For example, areas like Kwambe, Twatwatwa, Mabwegere, Godes and Madoto have relatively large numbers of livestock compared to other areas (Figure 17). This illustrates that the areas are relatively productive and the grass regeneration potential is high. Ngaite, Kiduhi and Mfilisi have a slightly lower number of cattle, suggesting that these areas might be less productive. In other words, the ratio of livestock per area is context specific and it may also be affected by many other factors but mainly by availability of water and fertile soil.

Figure 17: Livestock per area



Source: District socio-economic profile (2018)

Despite the economic potential of pastoralism in Kilosa, the district has not invested to full potential in cattle services (Annexe 1). For example, only six among 40 wards have at least three cattle services and infrastructure in the district (Annexe 1). However, one development partner, the United Nations Development Program (UNDP), is implementing model hay farming in the district. Hay growing ‘model class exhibitions’ are aimed at supporting a sedentary livestock-keeping lifestyle. It is not yet clear if UNDP has had any success with the project. However, most communities practice pastoralism as a way of life, therefore, seasonal movement (migration) is key and contrary to what the UNDP is trying to achieve in the district.

Legal land issues

Kilosa, like the other three districts, enacted and is implementing village and district bylaws guiding pastoralist and livestock movement. The district also brands livestock to trace their area of origin. As a result, any movement of livestock in or out of Kilosa has resulted in fines and penalties for individual pastoralists.

The district agriculture officer indicated that the district established a village peace committee whose major function is to settle disputes between farmers and pastoralists. However, the officer alleged that in some cases the peace committees have not worked well for farmers. He explained that farmers have not been well compensated in several cases and he suspected corruption in some of these incidents (interview August 2018). Such issues require further investigation at the local level.

Technology and capacities

Like Mvomero, Kilosa district needs capacity building at both the district and village levels. Few of the district staff and VEOs understand VLUP processes. Moreover, funds are needed to obtain reliable GIS software and related hardware, such as GPS equipment. Additional capacity is needed in conflict resolution skills to make the JVLUP work pre- and post-implementation.

Conclusion and recommendations

Despite a history of clashes between pastoralists and farmers, this study can reliably conclude that establishing rangelands would provide more safeguards for vulnerable pastoralist communities in Kilosa district. Indeed, the district has all of the major requirements for pastoralism practice—water and pasture lands. There is sufficient support from district administration to execute further LUP in the area to ensure each community and group has reliable access to land and related resources. The existing willingness to end land-based conflicts in the district and the environment are optimal for pastoralism. Despite all of the potential, it is recommended to carefully engage communities from the beginning to ensure that the existing boundary conflicts are addressed before fully embarking on the implementation of JVLUP.

4 Overall conclusions and recommendations

4.1 Conclusions

This study aimed to understand contextual issues, challenges and opportunities for undertaking JVLUP in two clusters of districts in the Pwani and Morogoro regions. It shows that protecting rangelands for pastoral communities in Tanzania is becoming a real challenge for many actors in the livestock sector because of a growing rush for land by individuals and companies. Findings indicate that JVLUP in pastoral areas can be used as a tool to resolve conflicts between land users, rationalize land use, and ensure that adequate land is protected for local livelihoods, now and in the future. District officials agree that a meaningful participatory VLUP will help district councils control land-based conflicts, which will intensify if LUPs are not respected, especially during drought years when resource competition peaks in the studied districts. In all studied districts, it was observed that successful LUP initiatives depend on understanding political, economic, social, technological, environmental and legal factors which may facilitate or inhibit a process such as LUP among district and village officials. While JVLUP is legally sanctioned, realities on the ground are challenging given the complex political, socio-economic, environmental, cultural and climate change contexts.

In addition, this study, like many other studies on land use and pastoralists matters in Tanzania (Benjaminsen et al. 2009; Matee and Shem 2006 and Homewood et al. 2004), stresses that efforts to 'modernize' agriculture created an environment that is not conducive to pastoral life. Efforts such as irrigation schemes in river basins, for instance, ignore pastoralists' need to access water and pasture during dry seasons. Our findings clearly indicate that livestock keepers contribute significantly to district coffers as the second largest income generator after crop cultivation. Yet, livestock keepers in these districts continue to face discrimination, exclusion and violence. On these premises, we suggest that the implementation of JVLUP could create meaningful and inclusive LUP at both the village and district levels.

4.2 Recommendations

A key aim of this study was to provide recommendations to implementing partners of the SRMP about which districts have the potential to scale up the implementation of JVLUP. Based on the overall assessment of the four districts, the results indicate that only three districts are in a favorable position to establish JVLUP because Bagamoyo district has been officially declared a planning area. Though the context analysis has been sufficient to provide a good understanding of the socio-economic and political background for VLUP in these districts, it is recommended that further steps be taken before VLUP commences including:

Conduct detailed baseline studies at the village level: Understanding social patterns and grassroots politics is essential to LUP and project sustainability. This includes understanding of any disagreements or conflicts regarding land use, boundary issues, interests of different stakeholders and the engagement of different community groups in decision-making processes.

Focus on districts where the context is more amenable to planning: Though there are significant numbers of livestock and pastoralists in Bagamoyo, the change from village to urban/industrial use bedding proposed at high levels raise concerns that are unlikely to be addressed within the project's lifetime. It is therefore recommended that the project focus on districts other than Bagamoyo for further scaling up of JVLUP.

Advance the need for legal reforms to respect and protect the rights of formalized village lands: Government and other stakeholders working on LUP need to respect and protect completed VLUPs, including JVLUPs because these plans are costly in terms of finance, time and other associated efforts. Those supporting VLUP processes also need to invest resources to advocate for reforms of current laws and regulations to provide a more enabling environment in which planning can occur.

Invest in innovative approaches to land dispute resolution such as peace committees from the village, districts and regional levels to build trust among farmers and pastoralists: While the core function of the committee is to address land-based conflicts pitting pastoralists and farmers against each other, there are claims of bias by district committees such as favouring pastoralists and undermining farmers' interests. In other places, pastoralists claim to be marginalized by committee and government structures dominated by officials from farming communities.

Aim to build the capacity of village and district authorities to identify enablers and inhibitors of LUP in their jurisdictions: For example, enable village and district officials to understand political, economic, social, technological, environmental and legal factors which may facilitate or inhibit a process such as LUP in study districts as detailed above.

Engage communities in all processes of LUP: In all districts, it is recommended that all stakeholders carefully engage communities from the beginning to ensure the existing boundary conflicts are addressed before fully embarking on the implementation of JVLUP.

Annex I: Research questions used

These specific questions were prepared for interviews at two levels: the broader questions were used for officials at the regional and national levels and the more detailed ones were used at the district level.

Broader national and regional level questions

1. What are the important contextual issues to consider when doing VLUP in areas where there are pastoralists/livestock keepers and farmers (a) generally and (b) in the district(s)?
2. Who are the key stakeholders that are involved in, have an interest in and/or influence VLUP, i.e. from national, to region, to district, to village in specific areas where pastoralists and crop farmers reside?
3. Which stakeholders have greater and/or lesser influence on VLUP and why? What opportunities and challenges exist to make it a more level playing field between stakeholders? How could this be achieved?
4. Taking each of these stakeholders separately—what are their needs, positions and interests in VLUP processes, and what might their influence and impact be on it?
5. Are there any stakeholders that would be good allies in the VLUP process (from national, regional, to district)? Who are they, what are their motivations, how might they support the process and how could this support be optimized?
6. In general, do regional officials support VLUP including the protection of grazing areas? Would they support the process including JVLUP across villages? What in their opinion is the capacity of the districts to support VLUP in the region including the districts of this study? What are the major gaps in the districts' capacities for VLUP? Do they think that JVLUP would work well in their district? Do they see any challenges with the approach—and if so, what are they? Would the district support JVLUP in the district?
7. What is the impact of higher-level planning processes on the district (and hence the VLUP processes) and what important issues need to be considered? Are there any old/new national planning decisions that might impact district and VLUP activities? What are they? What might their impact be? If negative, how could this be mitigated or addressed?
8. What capacity does the district have to implement decisions made about land use at the district level? What challenges and opportunities exist for this? How could the project improve this capacity, particularly in areas where there are pastoralists and farmers?
9. What national plans for changes in land use exist for the four districts in this study, and/or in neighbouring districts that might have an impact on land use in the districts and VLUP? Who is responsible for these changes? What is the timeframe of these changes? What impact will these changes have on the different districts (and villages within those districts), and what are the implications for working with villages on LUP?
10. What regional plans for changes in land use exist for the four districts in this study, and/or in neighbouring districts that might have an impact on land use in the districts and VLUP? Who is responsible for these changes? What is the timeframe of these changes? What impact will these changes have on the different districts (and villages within those districts), and what are the implications for working with villages on LUP?

B. District level questions

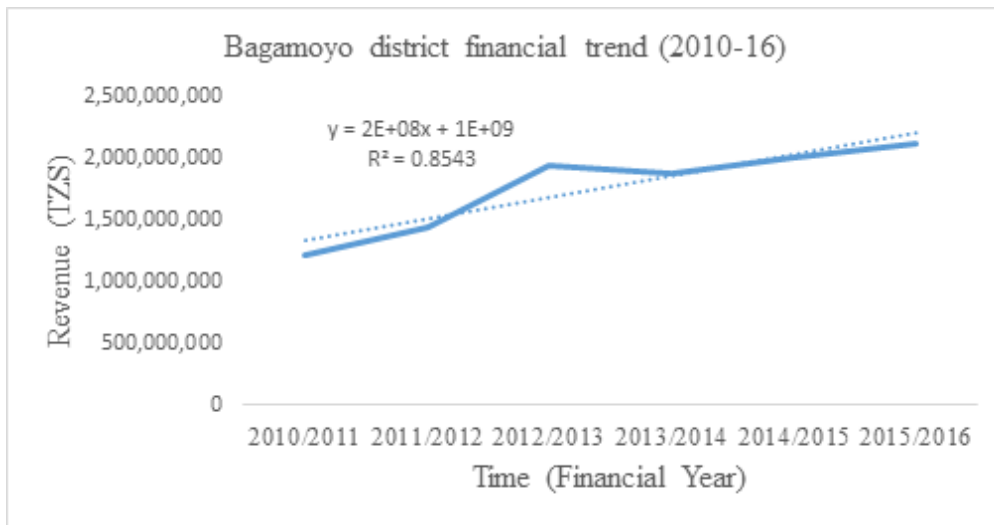
1. Does the district have a district land use framework? When was this produced? Which stakeholders contributed to the development of this framework? Was there any disagreement between stakeholders during the process of developing the district land use framework, and if so, what were they and how were the disagreements resolved? Have there been any disagreements between stakeholders since the process of developing the district land use framework, and if so, what were they and how were the disagreements resolved?
2. What is the population of the district? In terms of percentages, describe the inhabitants' tribes, i.e. Makonde, Barbaig or Sukuma etc.
3. How are decisions made about land use at the district level, and what influence does this currently have on decisions made at the village level? What challenges and opportunities exist for this?
4. Who are the key stakeholders that are involved in, have an interest in, and/or influence VLUP in this district?
5. Which stakeholders have greater and/or lesser influence on VLUP and why? What opportunities and challenges exist to make it a more level playing field between stakeholders? How can this be achieved?
6. Taking each of these stakeholders separately—what are their needs, positions and interests in VLUP processes, and what might their influence and impact be?
7. Are there any stakeholders that might disrupt the VLUP processes in the district, who are they, what are their motivations, how might they disrupt the process and how could this be mitigated/resolved?
8. Are there any stakeholders that would be good allies in VLUP in the district, who are they and what are their motivations? How might they support the process and how could this support be optimized?
9. What particular issues need to be considered when carrying out VLUP in this district and particularly in areas where there are livestock keepers and crop farmers?
10. Are there any large-scale investments in the district? If yes, what/where are these? Are there any conflicts between these large-scale investments and local land users? Are there any new large-scale investments planned in the next five years?
 - Are there any industrial or urban zones in the district? If yes, what/where are these? Are there any conflicts between these industrial or urban zones and local land users? Any new industrial zones planned for in the next five years?
 - Are there any extractive industries/mining in the district? If yes, what/where are these? Are there any conflicts between these extractive industries/mining and local land users? Any new planned extractives industries in the next five years?
 - Are there any government ranches in the district? If yes, what/where are these? Are there any conflicts between these large-scale investments and local land users? What are the future plans for these government ranches? Any new planned ranches in the next five years?
11. How is land allocated in the district to:
 - Conservation areas?
 - Forests?
 - Large-scale investments?
 - Infrastructure development?
 - Industrial or urban zones?
 - Mining and extractive industries?
12. Are there any challenges with land allocation and what are these? To what extent are village councils involved in these decisions? If communities loose land and/or need to be resettled, do they get compensation? If yes, how much do they get? Are there any large-scale investments in the district? If yes, what/where are these? Are there any conflicts between these large-scale investments and local land users? Any new large-scale invest-

ments planned in the next five years?

13. Are there any boundary conflicts between this study district and neighbouring districts? If so, what are they, where are they, who is involved and when did they start? Have the conflicts been resolved and if not, what is being done about them? Are they likely to be resolved in the next two years? If so, how? Would this conflict impact potential work that SRMP might support?
14. Have there been any major changes in land use over the last five years? What were they, who was responsible for the change, why did the change happen, when did it happen and what has been the impact of this land use change both within the immediate area, in the district as a whole and on neighbouring districts including on pastoralists and farmers?
15. Are there any major changes in land use planned over the long term in the district? What are they, who is responsible for the change, why is the change happening, when will it happen and what will be the impact of this land use change in the immediate area, in the district as a whole and on neighbouring districts? Are there likely to be any negative impacts of this change on different land users (including pastoralists and farmers)? If so, how will these be mitigated/addressed? Do you have any plans of the changes that you can share with us?
16. What are the major water uses in the district and who are the main stakeholders involved? Taking each of these separately—what are their needs, positions and interests in land and what influence do they have on water use decisions?
17. Have there been any major changes in water use over the last five years? What were they, who was responsible for the change, why did the change happen, when did it happen and what has been the impact of this land use change both within the immediate area, in the district as a whole and on neighbouring districts?
18. Are there any major changes in water use planned in the next five years? What are they, who is responsible for the change, why is the change happening, when will it happen and what will be the impact of this land use change in the immediate area, in the district as a whole and on neighbouring districts? Are there likely to be any negative impacts of this change on different land users (including pastoralists and farmers)? If so, how will these be mitigated/addressed? Do you have any plans of the changes that you can share with us? Are there any major conflicts over water use in the district? If yes, what are they?
19. Are there any major conflicts over land use in the district? If yes, what are they? Who is involved in the conflicts? What is the reason for the conflict? What are the root causes of the conflict? Are any attempts being made to resolve the conflict? If so, what are these attempts and are they effective? Is the conflict still ongoing? Is it anticipated that the conflict will continue or stop? Please elaborate.
20. Are there any conservation (wildlife or forest) areas in the district? If yes, what/where are these? Are there any conflicts between these conservation areas and local land users? If yes, who is involved in the conflicts?
21. Are there any major physical features or characteristics that impact land use including pastoralist land use in the district? If so, what are they and what impact do they have?
22. How do pastoralists use the resources in the district? According to local pastoralists, what are the major grazing areas in the district and where are they? Are they included already in VLUP? Are they shared by different communities? If so, which communities? How are these grazing areas currently being managed? Are there any problems in accessing these grazing areas? If so, what are they? Is there freedom of movement of livestock and pastoralists between these grazing areas? If not, what is hindering/blocking the movement? What challenges are faced by pastoralists using the grazing areas?
23. Are there other shared rangeland resources such as water? Where are the major shared water points for livestock? Are they shared by different communities? If so, which communities? How are these major water points currently being managed? Are there any problems in accessing these water points? If so, what are they? Is there freedom of movement of livestock and pastoralists between these water points? If not, what is hindering/blocking movement?

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24. Are livestock routes known in the district? Are these protected in any way, i.e. to ensure mobility? Are there any challenges in this? What are they?
 25. In general, do district officials (and members of Parliament) support VLUP including the protection of grazing areas as part of this? Would they support the process including joint VLUP across villages? Has the district allocated any funds for VLUP in this year's budget? Is there a PLUM team at district level already established? What level of experience have they had in implementing VLUP in the district? Have they heard of JVLUP? Do they think that JVLUP would work well in the district? Do they see any challenges with the approach? If so, what are they? Would the district support JVLUP in the district?
 26. Are there any NGOs or UN agencies working with pastoralists in the district? What are they doing? Where are they working? Have there been any challenges faced by the NGOs? And if so, what are they? Do these challenges still exist? How are these being addressed? Are any NGOs involved in land, LUP and land rights issues? If so, what are they doing? What has been the impact of this? Are any NGOs involved in VLUP? Have there been any challenges faced by NGOs? If so, what are they?
 27. Are there any government programs working with pastoralists in the district? What are they doing? Where are they working? Have there been any challenges faced by the government program? If so, what are they? Do these challenges still exist? How are they being addressed? Are any government programs involved in land, LUP and land rights issues? If so, what are they doing? What has been the impact of this? Have there been any challenges faced by government in the implementation of project(s)? If so, what are they?

Annex 2: Bagamoyo district financial trend



Source: Bagamoyo investment profile (2018)

Annex 3: Bagamoyo proposed plans for livestock product value addition

Proposed product	All animal products can easily be available; these products can be processed into different animal by-products such as butter, ghee, cheese etc.
Potential targeted areas	Areas in 11 wards have been earmarked for livestock keeping have, including: <ol style="list-style-type: none"> 1) Fukayosi ward (along the highway and 30 km. from district headquarters) 2) Kiromo ward (along the highway and 7.3 km. from district headquarters) 3) Zinga ward (along the highway and 14.6 km. from district headquarters) 4) Kerege ward (along the highway and 25.4 km from district headquarters) 5) Mapinga ward (along the highway and 28.2 km from district headquarters)
Target market	There are no milk collecting centres. There are some tourist hotels along the shore of Bagamoyo Town such as Malaika, Oceanic, Millennium, Livingstone, Gogo and Traveler. There is accessibility to Dar es Salaam where there is a larger number of consumers. The target is to increase the milking facilities within the villages as well as establishment of small milk processing units.
Type of investors	A larger scale dairy farmer with capital who can extensively introduce or construct an industry or cooling facility which would collect milk from the farmers from different parts of the district, for example, Dunda, and sell to other parts of the world. The investor should also be able to encourage and provide incentives to the dairy farmers in order to improve and increase milk production.

Source: Bagamoyo investment profile (2018)

Annex 4: Livestock facilities present in Kilosa

No.	Ward	Dips	Veterinary centres	Livestock markets	Crushes	Hide/ skin sheds	Slaughter slabs	Abattoirs	Facility-based selection
1	Rudewa	3	0	1	0	0	1	0	Yes
2	Chanzuru	1	0	0	1	0	2	0	Yes
3	Dumila	1	1	1	1	1	0	1	Yes
4	Mikumi	2	1	0	1	1	0	1	Yes
5	Tindiga	1	0	1	1	0	1	0	Yes
6	Kilangali	1	0	1	0	0	1	0	Yes
7	Magomeni	0	0	0	0	1	0	1	No
8	Kasiki	1	0	0	0	0	0	0	No
9	Mkwatani	0	0	0	0	0	0	0	No
10	Mbumi	0	0	0	1	1	0	0	No
11	Kimamba A	1	0	0	0	0	0	0	No
12	Kimamba B	0	0	0	0	0	1	1	No
13	Lumbiji	0	0	0	0	0	0	0	No
14	Madoto	1	0	1	0	0	0	0	No
15	Magole	2	0	0	0	0	1	0	No
16	Kitete	1	0	0	1	0	0	0	No
17	Msowero	0	0	0	1	0	1	0	No
18	Magubike	0	0	0	0	0	1	0	No
19	Maguha	0	0	0	0	0	0	0	No
20	Berega	2	0	0	0	0	1	0	No
21	Mabula	0	0	0	0	0	0	0	No
22	Mamboya	1	0	0	1	0	0	0	No
23	Kidete	0	0	0	0	0	1	0	No
24	Lumuma	0	0	0	0	0	1	0	No
25	Kidodi	0	0	0	0	0	0	0	No
26	Ruaha	0	0	0	0	1	0	1	No
27	Malolo	0	0	1	0	0	1	0	No
28	Vidunda	0	0	0	0	0	0	0	No
29	Kisanga	3	0	0	0	0	1	0	No
30	Ruhembe	0	0	0	0	0	0	0	No
31	Uleling'ombe	0	0	0	0	0	0	0	No
32	Ulaya	0	0	0	0	0	1	0	No
33	Zombo	0	0	0	0	0	1	0	No
34	Mabwerebwere	0	0	0	1	0	1	0	No
35	Masanze	0	0	0	0	0	1	0	No
36	Mhenda	0	0	0	0	0	0	0	No
37	Parakuyo	0	0	1	2	0	0	0	No
38	Mtumbatu	0	0	0	1	0	0	0	No
39	Mbigiri	0	0	0	0	0	0	0	No
40	Mvumi	0	0	0	0	0	1	0	No

Annex 5: Main rivers in Kilosa district

Ward	River streams (no.)	Water source-based selection
Ruaha	5	Yes
Kidodi	5	Yes
Berega	4	Yes
Kisanga	4	Yes
Ruhembe	4	Yes
Vidunda	3	Yes
Mamboya	2	Yes
Mabula	2	Yes
Kitete	3	Yes
Kimamba 'A'	2	Yes
Chanzuru	2	Yes
Kasiki	2	Yes
Mbumi	2	Yes
Kilangali	2	Yes
Kidete	2	Yes
Malolo	2	Yes
Zombo	2	Yes
Mikumi	2	Yes
Msowero	1	No
Rudewa	1	No
Magubike	1	No
Tindiga	1	No
Masanze	1	No
Lumuma	1	No
Ulaya	1	No
Mabwerebwere	1	No
Total	58	

Source: District socio-economic profile (2018)

Annex 6: Irrigation schemes in Kilosa district

Name of scheme	Total (traditional and improved) (ha)		Percentage irrigated
	Potential	Irrigated	
Lumuma	1,250	1,210	97%
Ilonga	640	600	94%
Munisagara	110	97	88%
Mwega	680	580	85%
Kidayi	25	18	72%
Msolwa-Msowelo	850	600	71%
Msolwa-madam	130	89	68%
Msaganza	150	100	67%
Mwasa	950	630	66%
Chanzuru	680	430	63%
Kilangali seed farm	510	320	63%
Vidunda	120	75	63%
Mwasa	800	490	61%
Madizini	245	134	55%
Kimamba	760	400	53%
Chabi	1,605	700	44%
Lengawaha	120	50	42%
Chabima	100	35	35%
Mlegeni	1,800	554	31%
Kilangali	1,580	466	29%
Mvumi	1,350	353	26%
Lunezi	100	20	20%
Kivungu	460	84	18%
Msowero	1,550	250	16%
Zombo	1,550	250	16%
Ihombwe	120	15	13%
Madudumizi	305	28	9%
Lumbiji	4,225	360	9%
Msimba	1,080	60	8%
Rudewa	7,200	500	7%

Source: district socio-economic profile (2018)

Annex 7: List of interviewees

No.	Name	Designation	Contact
Pwani regional office			
1	Shangwe M. Twamala	Assistant administrative secretary, Economics and productive sectors	+255 784 808 669 +255 714 589 870
2	Judith Flugence	Agriculture officer	+255 764 071 997
3	Kamaoni Simon	Economist	+255 754 362 488
4	Elisante Saktay Qaduwe	Livestock officer	+255 787 302 606
5	Ibrahim Matovu	Human resource officer, former DED, Bagamoyo	+255 753 591 258
Bagamoyo district council			
6	Batuli Nyagasa	Agricultural officer	+255 754 878 490
7	Ali Ali Issa	Bagamoyo council chairperson	+255 756 278 097
8	Julius Mwang'anda	Acting DED	+255 754 597 752
9	Madian Mzamilu	Town planner	+255 762 447 433
10	Samatta Jalala	Livestock officer	
11	Geofrey Magongwa	Community development officer	+255 756 965 357
12	Helen Ernest Kisanji	Community development officer	+255 789 494 949
13	Rajabu Suleimani	Community development officer	+255 712 694 069
14	Halima Shaaban	Community development officer	+255 655 023 775
Chalinze district council			
15	Ahmed Mwarabu	Agriculture officer-agronomist	+255 757 787 102
16	Edes P. Lukoa	DED (now transferred to Wanging'ombe District Council)	
17	Adrew Manilakiza	Agriculture officer-statistics	+255 784 233 215
18	Seth Mgonja	Agriculture officer-mechanization	+255 789 339 521
19	Macrina Stephano	Livestock officer-extension	+255 768 380 050
20	Frank Wilson Makala	Community development officer	+255 758 244 888
21	Khama Isaac	Livestock development and head of department	+255 784 316 673
22	Sheila Mnuwa	Community development officer	+255 769 233 171
23	Mbonela Makenya	Community development officer	+255 754 832 329
24	Lightness Ndossa	Water technician	+255 765 571 802
25	Saidi Omari Zikatimu	Chalinze council chairman	+255 787 280 832 +255 714 454 949
26	Chilo Ndonde	Livestock officer	+255 783 474 300
27	Jerad Nzilole	Land officer	+255 787 228 191
28	Moses Hans Kibona	Land officer	+255 753 923 642
29	Sadallah Ally	District forest officer	+255 716 030 707
Morogoro regional office			
30	Mwaisaka Lukas	Assistant administrative secretary-land	+255 784 260 266
31	Jacob Kayange	Assistant administrative secretary-planning	+255 689 641 088
32	Rosalia Rwegasira	Assistant administrative secretary- agriculture	+255 782 484 211
33	Waziri Mahimbo	Assistant administrative secretary-livestock	
Mvomero district council			
34	Jibril Mandari	Planning officer-statistician	+255 718 651 973
35	Juma Magaigwa	District water engineer	+255 768 925 087
36	Sia Ngao	Community development officer-Head of department	+255 715 756 633
37	Ali Gila	Agriculture extension officer	+255 784 384 832

38	Daina M. Munywaga	Agriculture department-Head of the department	+255 754 624 393
39	Gotrida Komba	District legal officer	+255 715 213 495
40	Sadallah Ally	District forest officer	+255 716 030 707
41	Natujwa Mellau	District livestock officer-Head of Department of Livestock	+255 784 405 673
42	Sadoth K. Kyaruzi	Town planning officer	+255 713 119 456
43	Keneth Mwenda	District land officer	
Kilosa district council			
44	Francis Kaunda	District planning officer	+255 719 072 263 or +255 688 310 284
45	Ibrahim Ndembo	Head of Department of Land and Natural Resources	+255 653 471 167
46	Abel A. Mchome	Agricultural officer	+255 787 127 313
47	Rwegelela Katabaro	Community development and Head of the Department of Community Development	+255 767 220 971 or +255 626 102 225
48	Simforosa Mollel	MKURABITA coordinator (community development)	+255 784 659 033
49	Joshi Khamis Chum	District water engineer	+255 713 454 265 or +255 784 454 265
50	Seraphine Mganda	Wildlife officer	+255 765 843 382
51	Magesa	District livestock officer	
52	Mkambala	DED	+255 719 600 802
53	Nyabange Samuel	TFS, Kilosa manager	+255 685 060 769
54	Masheka C. Mtatiro	District land officer	+255 719 512 761
NLUPC			
55	Stephen Nindi	Director	
56	Mama Burra	Staff	
57	Charles Mkalawa	Staff	

References

- Benjaminsen, T.A., Maganga, F.P. and Abdallah, J.M. 2009. The Kilosa killings: Political ecology of a farmer-herder conflict in Tanzania. *Development and Change* 40(2): 423–445.
- Chung, Y. 2015. *Engendering the land grab: Development, involuntary resettlement and the struggles for social reproduction in coastal Tanzania*. Master's Thesis, Faculty of the Graduate School of Cornell University. New York, USA.
- Dickman, A.J. 2008. *Key determinants of conflict between people and wildlife, particularly large carnivores, around Ruaha National Park, Tanzania*. PhD Thesis, University College of London and Institute of Zoology, Zoological Society of London. London, UK.
- Fratkin, E. 2001. East African pastoralism in transition: Maasai, Boran and Rendille Cases. *African Studies Review* 44(3): 1–25.
- Homewood, K., Coast, E. and Thompson, M. 2004. In-migrants and exclusion in east African rangelands: Access, tenure and conflict. *Africa* 74(4): 567–610.
- IPP Media. 2017. Bagamoyo EcoEnergy takes govt for arbitration. 16 September 2017. (Available from <https://www.ippmedia.com/en/news/bagamoyo-ecoenergy-takes-govt-arbitration>)
- Maganga, F.P. 2002. The interplay between formal and informal systems of managing resource conflicts: Some evidence from south-western Tanzania. *European Journal of Development Research* 14(2): 51–70.
- Massay, G. 2017. *In search of the solution to farmer-pastoralist conflicts in Tanzania*. Occasional Paper: Johannesburg, Southern African Institute of International Affairs.
- Mattee, A. Z. and Shem, M. 2006. *Ambivalence and contradiction: A review of the policy environment in Tanzania in relation to pastoralism*. Issue Paper 41. London, UK: International Institute for Environment and Development.
- Mwamfuye, D. 2015. Persistence of farmer-herder conflicts in Tanzania. *International Journal of Scientific and Research Publications* 5(2): 1–8.
- Nelson, F. 2012. Natural conservationists? Evaluating the impact of pastoralist land use practices on Tanzania's wildlife economy. *Pastoralism: Research, Policy and Practice* 2(15). (Available from <https://doi.org/10.1186/2041-7136-2-15>)
- Sulle, E. 2017. *Of Local People and Investors: The Dynamics of Land Rights Configuration in Tanzania*. Danish Institute for International Studies (DIIS) Working Paper. Copenhagen, Denmark: DIIS.
- Tenga, R.W and Mramba, J. 2015. *LGAF Synthesis Report*. The World Bank
- Tanzania Natural Resources Forum. 2012: *Making land investment work for Tanzania: Scoping assessment for multi-stakeholder dialogue initiative*. Arusha: Tanzania. (Available from <http://www.tnrf.org/LBI-report.pdf>) (Accessed on 12 May 2019).
- United Republic of Tanzania. 2011. *Investment opportunities in livestock industry*. Ministry of Livestock and Fisheries Development
- United Republic of Tanzania .2012. *Bagamoyo district in brief; statistics for brief planning*. National Bureau of Statistics.
- United Republic Tanzania. 2015. *Taarifa ya Kamati Teule ya Bunge Iliyoundwa Kuchunguza Sababu za Migogoro Baina ya Wakulima, Wafugaji, Wawekezaji na Watumiaji Wengine wa Ardhi Nchini, Kamati Teule ya Bunge*. Dodoma, Bunge la Tanzania.
- United Republic of Tanzania. 2013. *Population and Housing Census of 2012*. Dar es Salaam: National Bureau of Statistics. (Available from http://www.tzdp.gov.tz/fileadmin/documents/dpg_internal/dpg_working_groups_clusters/cluster_2/water/WSDP/Background_information/2012_Census_General_Report.pdf)
- United Republic of Tanzania (URT). 2016. *Kilosa District. Investment Destination of Your Choice*. PO-RALG.

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