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LANDSCAPE APPROACH IN ADDRESSING LAND USE AND TENURE ARRANGEMENTS AMONG PASTORAL COMMUNITIES IN EASTERN AFRICA: THE CASE OF TANZANIA

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Abstract

Land use and tenure related conflicts are not new in Tanzania including between farmers and livestock herders. Conflicts are increasingly becoming common places as human and animal population heightens, urbanization grows and increases in other land uses such as agriculture, mining, infrastructure development and other emerging uses. Pastoralists are used to their mobility to ensure sustainable availability of pasture, water and minerals and maintenance of gene diversity. Nonetheless, economic and human development processes have tremendously reduced land available for pastoral mobility resulting in increasing challenges over access to resources and land.

For decades conventional village spatial planning has further restricted pastoral movement within village jurisdiction boundaries. Recently, spatial planners have embarked on developing Joint Village Land Use Plans and Agreements to enable more space and diversity for pastoral mobility, protecting shared grazing areas across village boundaries as part of this. As part of a wider and an integrated approach that looks at the challenge in its holistic and integral manner, there is opportunity for reconciling different land uses in the landscape and improving mutual benefits. A landscape approach is now gaining momentum in addressing multiple land uses in a particular wider sphere. It takes different land uses in an inclusive and co-existence manner and allows for community participation and other stakeholders' engagement in the discourse on how best to addresses their challenges.

The Sustainable Rangeland Management Project (SRMP), being implemented by the Government of Tanzania and ILRI (International Livestock Research Institute) is scaling up the Joint Village Land Use Planning in order to reconcile conflicts and protect rangelands resources. The central districts of Tanzania including Bagamoyo, Chalinze, Mvomero, Morogoro and Kiteto forming a Central-Eastern pastoral landscape are experimenting this approach to address the challenges facing pastoral communities. As a starting point for identifying future intervention areas a pastoral landscape stretching from central Tanzania to the northern coastal area was mapped. Both



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spatial and non-spatial data were collected in these districts to aid in planning a larger area feasible for pastoral mobility and identifying project intervention areas. This included information on village boundaries, status of village land use planning, and different land uses. Research was undertaken with collection of secondary data and local level mapping.

This paper will provide details on how the landscape approach and a spatial mapping decision-making tool was developed to guide the process of identifying clusters of villages for joint village land use planning and the results of this. It will highlight how such an approach is important for planning development and land-related interventions and particularly where communities or villages share resources, as well as providing opportunity for improving local ownership of the process and as an advocacy/lobbying tool. It will confirm that a multi—sectoral and integrated approach to land use planning and conflict resolution is vital for long-term sustainability and use of the landscape. It will also confirm how a collaborative partnership between government, research organisations, CSOs and local communities can be beneficial on several levels.

Introduction

The National Land Policy of 1995, now under review, and enactment of its subsequent legislations including the Land Act No. 4 of 1999, Village Land Act No. 5 of 1999 and the Land Use Planning Act No. 6 of 2007 all provide the framework for land rights and secure tenure among different users including small producers – farmers and pastoralists. These legislations provide varied layers and levels of planning for effective land uses, setting up institutional arrangements. There is also a National Land Use Framework Plan (2013-2033), guidelines for preparing participatory and inclusive district and village land use plans (2006; 2013 respectively), a strategy (2017) and tools (2018) for further development of participatory land use plans in order to implement the government’s ten-year objectives to plan, survey/demarcate, register and title all land parcels. The National Land Use Planning Commission, District and Village Councils are statutory land use planning authorities. Land use planning levels include village-level; joint or clusters of villages enabling the management of cross-village resources; corridor and landscape development planning; zone; region; and national.



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Effectiveness including full implementation of the novel legislation has been marred by multiple administrative and financial challenges resulting in insecurities and vulnerabilities especially among small land holders. Land use and tenure-related conflicts are not new in Tanzania including between farmers and livestock herders. Conflicts are increasingly becoming common as human and animal population has heightened, urbanization grown and agriculture, mining, infrastructure development and other emerging land uses have increased. Pastoralists in particular, have found their land use compromised with mobility reduced and grazing lands lost and/or fragmented. Gaining access to resources required for their livelihoods is getting increasingly difficult. Further, changes in fiscal policies in Tanzania followed by trade liberalization since mid-1980s and early 1990s respectively, witnessed increased investments on land, robust change on land marketing and unprecedented monetization of land which in turn severely affected tenure security among marginal communities including pastoralists and other small landholders. In such a conflict situation, violent conflicts, loss of properties and lives, hate, rage and revenge smear prosperity of land users hence increased abject poverty, weakening livelihood assets and environmental distress.

Though village land use planning helps to manage and secure village land it can lead to a restricting of pastoral movements within and across village boundaries. Recently, to address this challenge sustainably, spatial planners have embarked on developing joint village land use plans and agreements. This is provided for in the Land Use Planning Act No. 6 of 2007 whereby several villages come together to plan for shared resources to enable more space and diversity for pastoral mobility and protecting shared grazing areas across village boundaries as part of this. As part of a wider and an integrated approach that looks at land use challenges in a holistic and integral manner, there is opportunity for reconciling different land uses in the landscape and improving mutual benefits. Such a landscape approach is now gaining momentum globally in addressing multiple land uses in a wider sphere of influence. It takes into account different land uses and interests and the linkages between them in an inclusive and co-existence manner; whilst also allowing for community participation and other stakeholders' engagement in the discourse



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on how best to address land use challenges in a sustainable manner. Though in principle the Government of Tanzania supports landscape level planning, it has not been implemented to any great extent beyond investment corridors, which have focused on economic growth and priority/single land uses rather than integrated land use planning.

The Sustainable Rangeland Management Project, being implemented by the Government of Tanzania, ILRI (International Livestock Research Institute) and local partners, is scaling up the joint village land use planning approach in order to reconcile conflicts, manage and protect rangelands resources. The central-east districts of Tanzania including Bagamoyo, Chalinze (Coast Region), Mvomero, Morogoro (Morogoro Region) and Kiteto (Manyara Region) form a Central-Eastern pastoral landscape and JVLUP is being implemented here in a number of clusters.

This paper provides insights on how the landscape approach and mapping was developed and the results of this. It provides frameworks on how the landscape approach is putting in place the best practices in addressing the gigantic challenges facing pastoral communities, their livelihoods and mobility. Further, the paper highlights how such an approach is important for planning development and land-related interventions, as well as providing opportunity for improving local ownership of the process and as an advocacy/lobbying tool. It confirms that a multi—sectoral and integrated approach to land use planning and conflict resolution is vital for long-term sustainability and use of the landscape. It will also confirm how a collaborative partnership between government, research organizations, civil society organizations (CSOs), community based organizations (CBOs) and local communities can be beneficial on several levels.

Landscape spatial planning decision-making tools

Landscape planning if done well focuses on landscape quality protection, and harmonising different values and interests in spatial development. Traditional application of land use change models based on economic models, trend analysis, and or scenario analysis present some challenges of data availability and reliability necessary for implementation of the models. However, with the advent of information technology, GIS and remote sensing, biophysical data



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known for having influence on land use allocation can easily be accessed (Nyeko 2012). The modern paradigm of the landscape is based on multidimensionality and interdisciplinarity, which makes the application of GIS indispensable in researching and analysing landscape approaches” (Reljic et al 2017). Though landscape spatial mapping has been used in conservation planning (see for example Lee 2010), it has not been used in mapping out socio-economic as well as environmental data to guide lower level land use planning processes in pastoral landscapes. Rarely is the physical distribution of land type, population and other compared with the land use systems that rely on or influence them. Though customary land uses in rangelands may be considered and mapped out, these have not been complemented by mapping of social-economics or such as conflicts hotspots.

Spatial mapping of a pastoralist landscape

In 2016, the Sustainable Rangeland Management Project (SRMP) launched the most recent phase of the Project focused on up- scaling the process of joint village land use planning, it had previously piloted. This required identifying clusters of villages which had potential for joint village land use planning. Joint village land use planning is a step-by-step process that leads to villages who share resources developing a joint village land use agreement for those shared resources and a management plan for them.

The SRMP has successfully supported the implementation of JVLUP in four clusters of villages in Kiteto District, Tanzania, after which group Certificates of Customary Rights of Occupancy (CCROs) are being issued, and a management plan being developed for the shared grazing land. Through the joint village land use planning process approximately 150,000 hectares across three clusters of villages have been secured so far, with the approach integrated into government strategies and guidelines. In 2017 the Project commenced the process of identifying new clusters across the pastoral landscape that stretches from the central areas of the country through to the north-east.



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This pastoral landscape from central Tanzania through to the north-eastern corner of Tanzania covers seven regions and around 42 districts. Pastoralists and their livestock move across these landscapes in response to seasonal changes in vegetation and water supply, and in order to access markets and other facilities. Major livestock routes cut across this landscape facilitating such movement. and in the past, there would have been rangelands extending across this landscape providing feed and forage for the livestock. However today, the rangelands have been reduced significantly and are now little more than patches amidst a sea of agriculture and urban areas. This makes movement across that landscape highly challenging and often results in conflicts between pastoralists and crop farmers. In addition, livestock routes are poorly serviced with few resting areas, veterinary posts or other infrastructure or services. SRMP has focused on a part of this landscape from the central-east districts of Tanzania including Bagamoyo, Chalinze (Coast Region), Mvomero, Morogoro (Morogoro Region) and Kiteto (Manyara Region)

As a starting point for identifying clusters of villages where joint village land use planning would be viable, a series of maps were produced using secondary data of part of the central livestock corridor in order to provide a visual image of the situation across the landscape and to guide the decision making process for identifying clusters with potential for the planning process. Both spatial and non-spatial data were collected in these districts to aid the planning across the larger area recognizing the connectedness of the landscape and pastoral mobility across it. This included information and maps on district socio-economic profiles, village boundaries, status of village land use planning, and different land uses. Some verification was undertaken with collection of secondary data and local level mapping, where resources allowed.

The product of the process was a series of maps, with some examples given below. To date mapping has been undertaken across four districts.

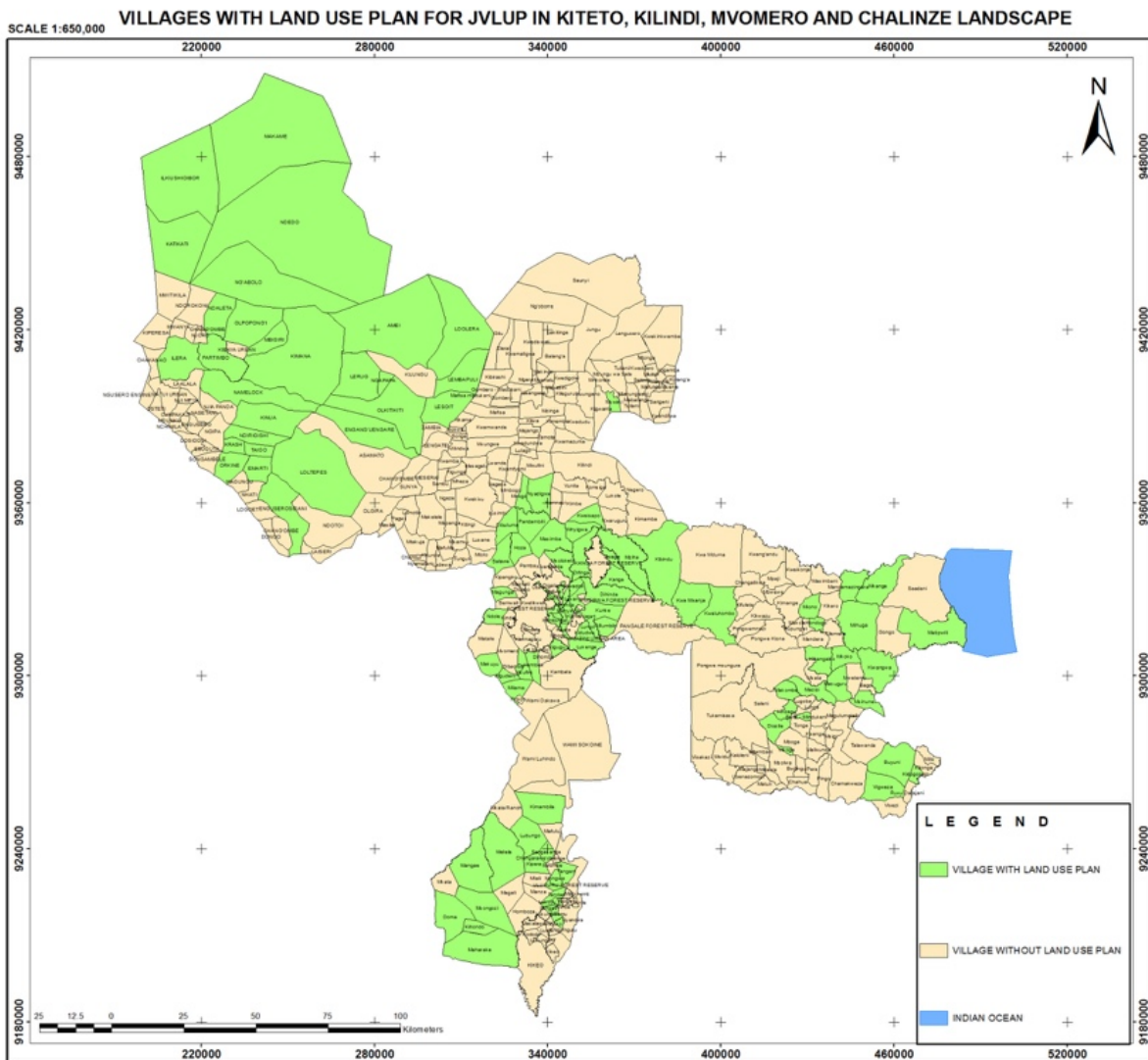


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Figure 1 Mapping undertaken across four districts to show presence of VLUPs



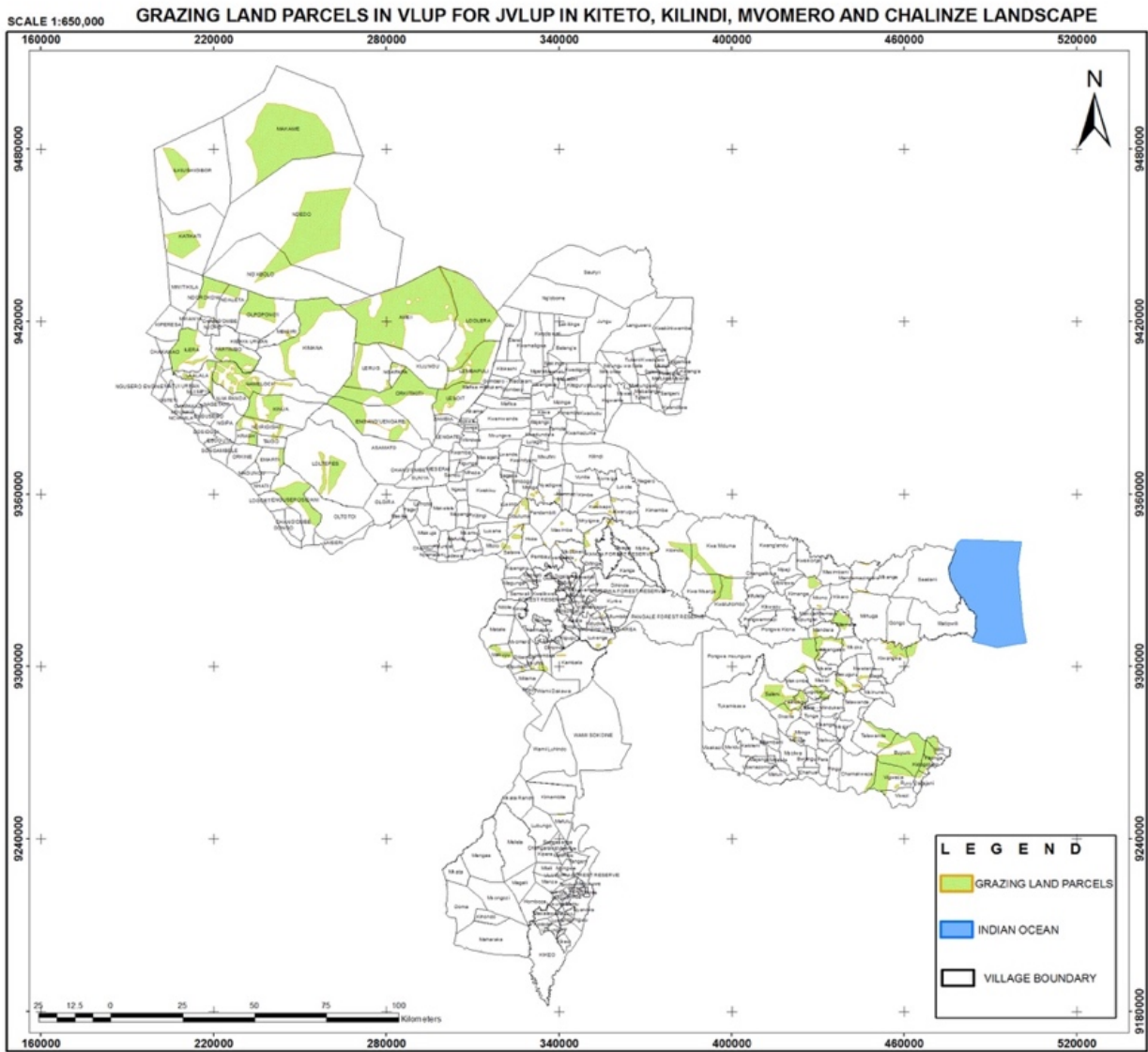


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Figure 2 Map showing grazing land parcels protected by VLUP across four districts



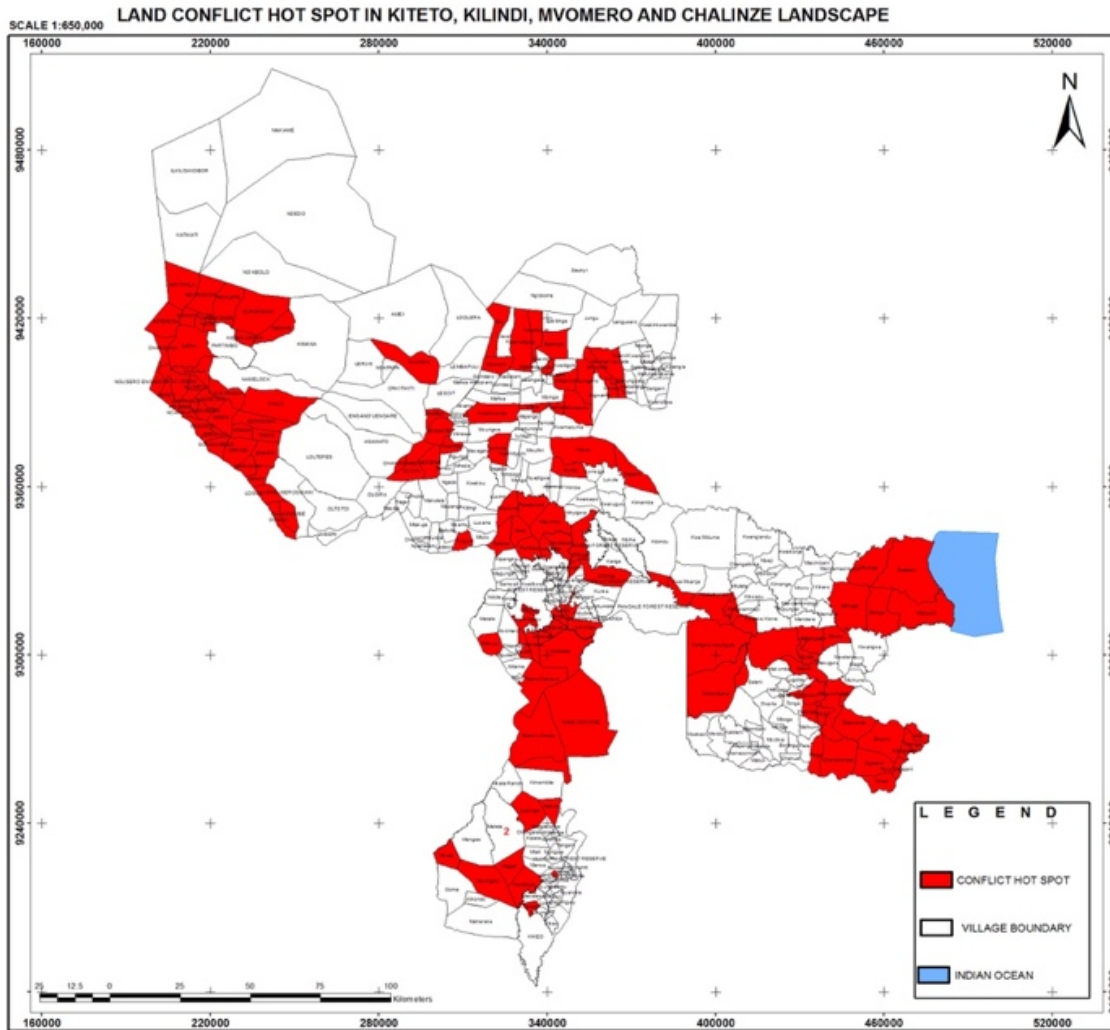


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Figure 3 Map showing conflict hotspots across the four districts



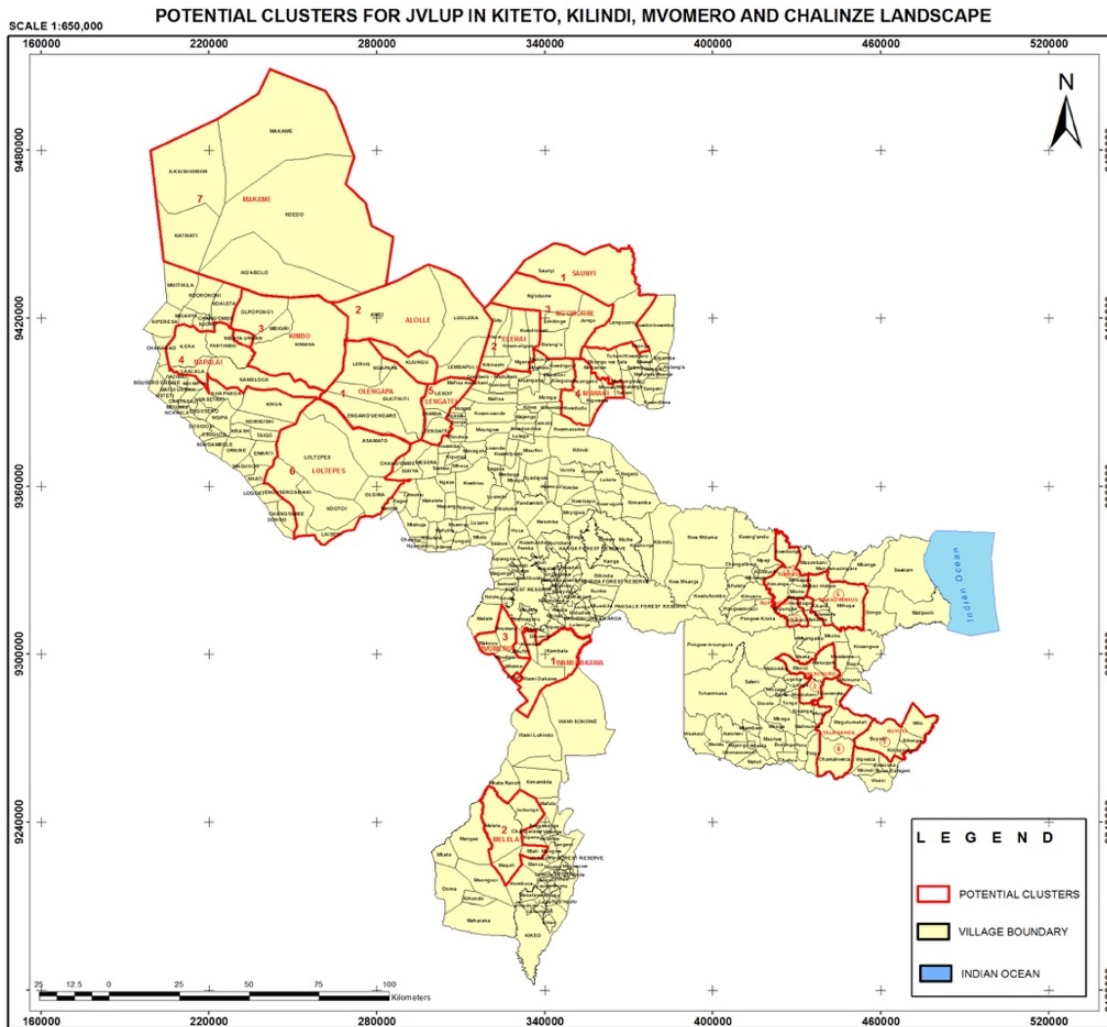


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Figure 4: Map showing potential clusters for JVLUP across four districts



As can be seen through the mapping process, it has been possible to begin identifying those villages that have potential for JVLUP considering the following criteria amongst others:

- Have significant grazing areas, livestock keepers and/or pastoralists
- Share livestock resources across village boundaries
- Preferably do not already have individual VLUP so that it is easier to facilitate sharing of resources and agreement over boundaries of a shared resources if no part of that boundary has so far been designated.



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- May have conflict but that conflict should not be unavoidable and/or out of the scope of the project (e.g. a district boundary conflict)

District maps that contribute to the cross-district landscape mapping have more detail – for example in Chalinze District maps were made of:

- Administrative boundaries
- Areas of large-scale investment
- Protected areas
- Conflict hotspots
- Crop cultivation
- Drainage systems
- General land
- Grazing land already designated in VLUPs
- High agricultural potential areas
- Livestock infrastructure
- Livestock distribution
- Livestock routes
- Human population densities
- Road network
- Urban areas
- Villages with land use plans

These were then put together and a map of factors limiting availability of rangelands was developed.

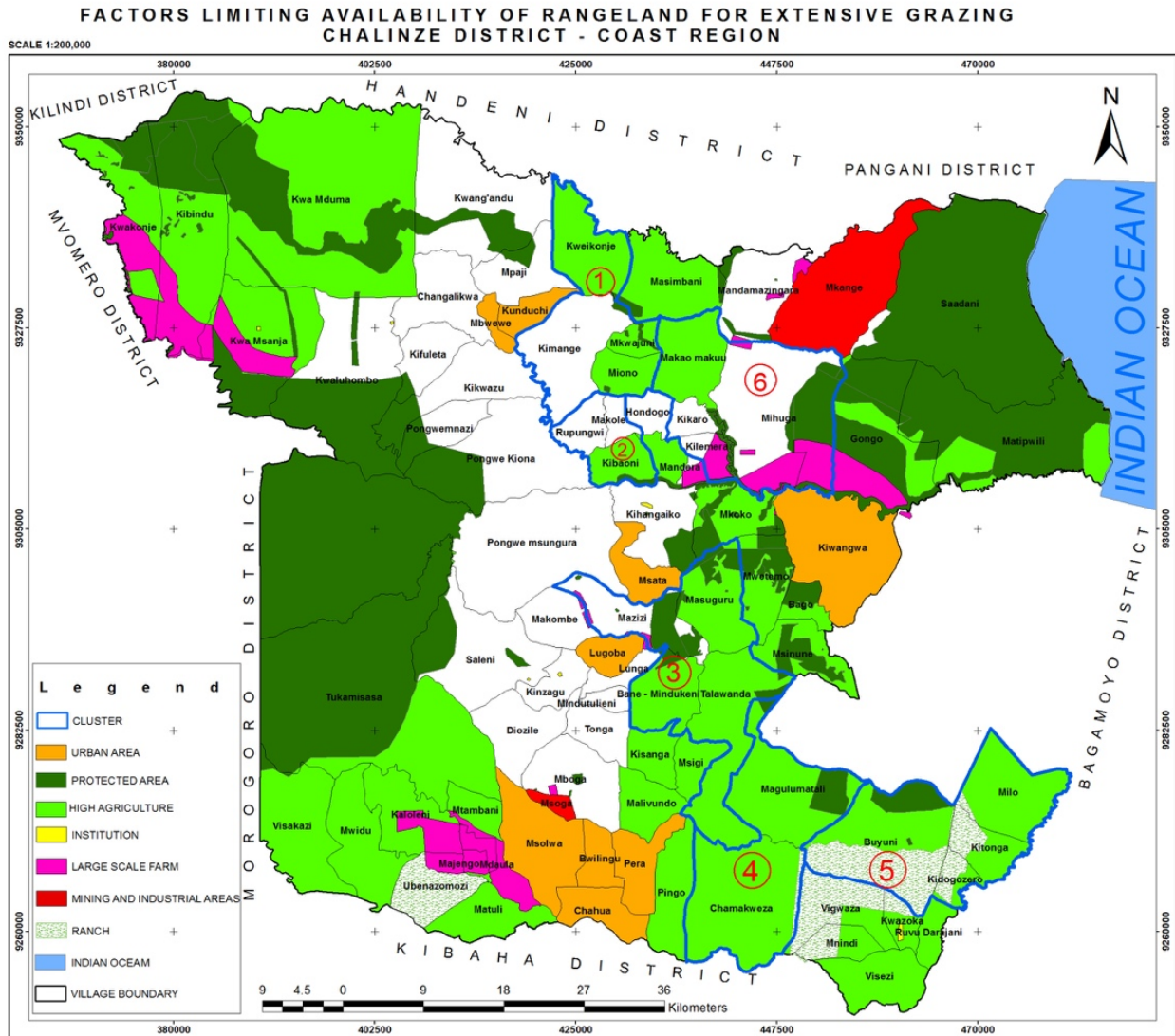


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Figure 5: Map of factors limiting availability of rangelands and potential clusters for JVLUP



This then led to the identification of six clusters of villages that had the most promise and opportunity for JVLUP. The Sustainable Rangeland Management Project is now undertaking some greater local level research including discussions with districts and local communities to ascertain whether the clusters do indeed have potential. Discussions are also underway to identify what in-kind or other inputs both district and/or communities could provide for the process.

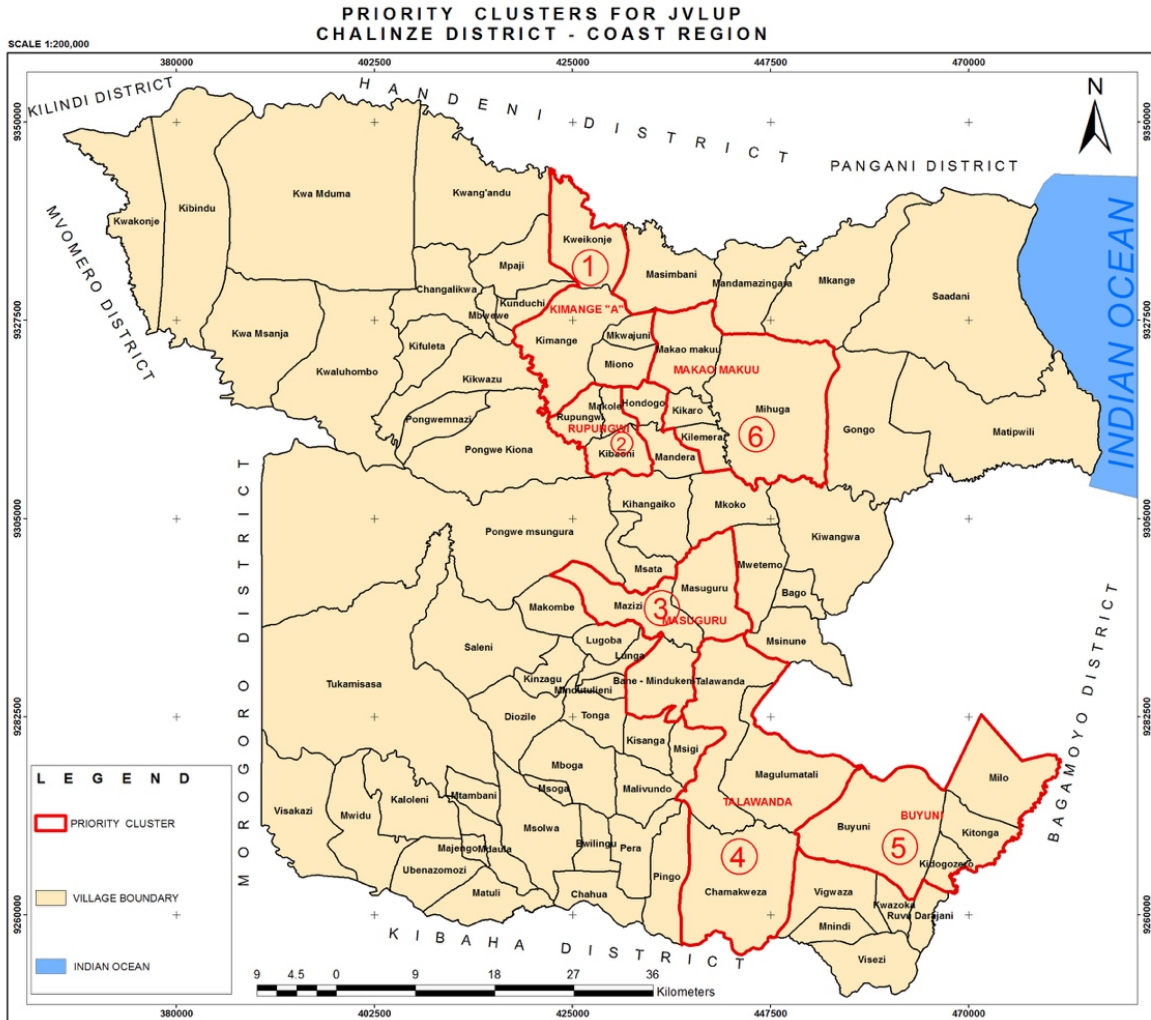


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Figure 6: Map showing potential clusters for JVLUP in Chalinzé district



Conclusions

Spatial mapping of data on socio-economics, population, land use, conflicts, administrative boundaries and other is an effective decision-making tool for joint village land use planning. It helps to present a visual picture of the situation, which can be verified by further research and data collection on the ground. Particularly for pastoralists who share resources across administrative boundaries a landscape approach to land use planning and land development is



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important to ensure that adequate resources are provided for this extensive livestock production, mobility is supported, and conflicts with other land users is prevented. The spatial mapping described here is also important as a guidance of a potential livestock investment corridor that would complement SAGCOT (Southern Agricultural Growth Corridor Tanzania), and provide guidance on where best investments could be made for improving the livestock sector including and most importantly in pastoral areas.

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