

Mapping of rangeland resources for spatial planning in Lamu county



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ILRI WORKSHOP REPORT



Mapping of rangeland resources for spatial planning in Lamu county

Workshop report

Lance W Robinson, Stephen Oloo and Yasin Getahun
International Livestock Research Institute (ILRI)

19–20 March 2019


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Editing, design and layout—ILRI Editorial and Publishing Services, Addis Ababa, Ethiopia.

Cover photo—Participants confirming details of the rangeland maps (photo credit: ILRI/Lance W Robinson)

ISBN: 92-9146-585-9

Citation: Robinson, L.W., Oloo, S. and Getahun, Y. 2019. *Mapping of rangeland resources for spatial planning in Lamu county*. ILRI Workshop Report. Nairobi, Kenya: ILRI.

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

ILRI has offices in East Africa • South Asia • Southeast and East Asia • Southern Africa • West Africa

Contents

Acknowledgments and disclaimer	v
Abbreviations and acronyms	vi
Introduction	1
Background	1
Past activities in the frontier counties	1
Proceedings	3
Opening of the workshop	3
Presentations	3
Group work	4
Discussion of the way forward	5
Closing remarks	6
Annex 1: Workshop program	7
Annex 2: List of participants	8

Acknowledgments and disclaimer

Funding for this workshop was provided by the Government of Switzerland through its embassy in Kenya. ILRI's role in this activity also benefitted from support from the CGIAR Research Program on Livestock.

CGIAR is a global partnership that unites organizations engaged in research for a food-secure future. The CGIAR Research Program on Livestock provides research-based solutions to help smallholder farmers, pastoralists and agro-pastoralists transition to sustainable, resilient livelihoods and to productive enterprises that will help feed future generations. It aims to increase the productivity of livestock agri-food systems in sustainable ways, making meat, milk and eggs more available and affordable across the developing world. The program thanks all donors and organizations who globally supported its work through their contributions to the CGIAR system.

This document reports on the proceedings of a workshop and contains opinions expressed by workshop participants. The views expressed do not necessarily reflect those of the Frontier Counties Development Council, ILRI, the Lamu county government or the Government of Switzerland.

Abbreviations and acronyms

FCDC	Frontier Counties Development Council
GIS	geographic information system
ILRI	International Livestock Research Institute
LAPSSET	Lamu Port-South Sudan-Ethiopia-Transport
NGO	nongovernmental organization
WWF	World Wide Fund for Nature

Introduction

Background

In Kenya's rangelands, resources such as water points, different categories of pastures (rainy season, dry season and drought) and livestock markets, as well as migration routes between all of these, are spread across landscapes usually without reference to county, subcounty and ward boundaries. Livestock owners move their herds to make opportunistic use of natural resources that are highly variable. This includes access to the best grazing available throughout the year including dry season grazing areas found along rivers or where there is a permanent water source. These key sites provide critical grazing when other pastures have been depleted. Easy and safe movement is vital if the marketing of livestock is to be supported and facilitated. Livestock routes are a key factor to consider in livestock development, trade and marketing, including exports.

Poor planning—and often a complete lack of planning—can result in interventions that contribute to the loss of these resources and degradation of rangelands. For instance, inappropriate placement of new settlements and water points often encroaches into livestock migration routes thus hampering movement of herds and leading to overgrazing. Poor planning also contributes to conversion of important drought pastures to other uses such as irrigated agriculture. All of these factors hinder livestock production across the entire landscape.

Spatial planning helps to ensure that existing resources are protected, communities understand the sharing of common resources, and new developments are executed in a way that supports rangeland management instead of undermining it. County governments are starting to develop county spatial plans. If done well, county spatial plans can play an important role in supporting rangeland management and improving the conditions for livestock production.

Past activities in the frontier counties

In all of Kenya, Lamu county has led the way in developing a county spatial plan. Recently, however, six of the other counties that are part of the Frontier Counties Development Council (FCDC)—Garissa, Isiolo, Mandera, Marsabit, Tana River and Wajir—have taken steps towards county spatial planning. With the assistance of ILRI and FCDC, they have developed maps of key rangeland resources such as livestock migration routes, intercounty pastures and conflict hotspots. The resulting maps and geographic information system (GIS) layers are now ready to inform county spatial planning processes. In the case of Lamu, the county spatial plan has already been developed and approved. Nevertheless, work is still needed which includes adding detail for specific sectors and implementing the plan.

With the support of the Swiss Embassy through FCDC and ILRI, a workshop was held for Lamu county to carry out an exercise to map rangeland resources. The workshop had the following objectives:

- Document and map resources accessed by pastoralists across subcounty and county boundaries in Lamu
- Produce maps and information to bring rangeland issues into spatial planning in Lamu County

- Develop a shared vision among key stakeholders in Lamu county about appropriate planning, sharing and management of rangeland resources

The workshop was held in Lamu Town on 19 and 20 March 2019. Participants were identified prior to the workshop by a team of 15 personnel from various departments of the county government, under the guidance of ILRI and FCDC. The participants included more than 30 'local experts': people who are knowledgeable about county livestock movements, rangelands, conflict areas and livestock-related infrastructure such as water points. Local experts included elders, community leaders, personnel from county and national government, nongovernmental organizations (NGOs) personnel and others. In addition to their expertise, participants also represented various ethnic groups and subcounties.

Proceedings

Opening of the workshop

The workshop opened with a prayer. Abdirahman Abass, the coordinator of the Sector Forum on Agriculture and Livestock of FCDC then gave opening remarks, including an overview of FCDC, its history and functions. Abass spoke about various trends and developments which have the potential to negatively impact rangelands and livestock production; he used the Lamu Port-South Sudan-Ethiopia-Transport (LAPSSET) corridor as an example. To avoid negative impacts, such developments, he suggested, need effective and participatory planning. He recalled how in his youth, livestock used to move freely around northern Kenya. The rangelands were productive and famine relief was a rare occurrence. Abass pointed out that the maps developed in the workshop will be used for county spatial planning, which could contribute to restoring livestock and rangeland productivity to previous levels. Six counties have already participated in mapping exercises: Garissa, Isiolo, Mandera, Marsabit, Tana River and Wajir. The FCDC expects to develop maps of northern Kenyan rangelands from Somalia and the Indian Ocean in the east to Kenya's borders with South Sudan and Uganda.

Bashora D. Wachu of the livestock unit of the county's Department of Fisheries, Livestock and Cooperative Development, welcomed participants. He emphasized that there are key resources used by livestock and that these need to be mapped. For example, if there is a borehole but it is not captured in any records or maps, then it is easier for someone to claim it as a private resource. He urged the participants to endeavour to be as accurate as possible as they carry out the mapping exercise. Wachu thanked everyone for coming to the workshop and urged all of the participants to use the workshop as an opportunity to build unity.

Paul Munyendo of the county Department of Lands and Physical Planning also welcomed participants.

Emmanuel Koech, assistant county commissioner, Witu, welcomed participants and highlighted the importance of considering grazing corridors in all development plans. Mapping and demarcating grazing corridors help to prevent conflict.

William M Magiri, assistant county commissioner for Hindi, also welcomed everyone. He praised Lamu county as a place which demonstrates the diversity of Kenya, highlighting that many tribes live side by side in Lamu and that Lamu people are friendly and hard working. Magiri recognized Lamu county as rich in resources. He thanked the FCDC and ILRI for supporting the workshop. Magiri encouraged participants to listen to each other and work together to develop a good plan for Lamu during this important workshop. Magiri then officially opened the workshop.

Presentations

Lance W Robinson of ILRI introduced the participants to county spatial planning and its potential for addressing challenges related to rangelands and extensive livestock production. He gave an overview of the workshop and

its objectives, highlighting that the workshop and the maps that it would result in are only one step along the way towards developing a county spatial plan that takes rangeland issues into account.

Munyendo summarized Lamu county's spatial planning process. Public participation activities occurred in various wards, which facilitated input and feedback. The plan took into account national priorities, particularly the National Spatial Plan. Munyendo acknowledged the length of the plan, which can be downloaded from the county website for free; a print copy may be purchased from the county. Lamu's development and county assembly approval of a spatial plan puts it ahead of many other counties, but the plan still needs to be implemented. This workshop will provide a forum for participants to focus on rangeland and livestock issues with the goal of incorporating knowledge and maps into the county spatial plan.

Lamu county's spatial planning process was supported by the World Wide Fund for Nature (WWF). Abdalla Faraj of WWF described how WWF and the Lamu county government came together to develop the county spatial plan. The development of a spatial plan is a legal requirement for all counties. He explained that Lamu's plan has been fully developed and approved and is now a legal document. However, for the plan to be successful it must first be implemented, which requires funding from the county government.



Participants in one breakout group adding features to the map (photo credit: FCDC/Abdirahman Abass).

Group work

Stephen Oloo of ILRI gave a brief introduction of the tools to be used in the mapping exercise which included: base maps (prepared from old topographical maps obtained from Survey of Kenya plus a few recent features), sticky notes (used to label places which are not labelled or the label is not legible), pencils (used to mark features on the

map during group discussions), marker pens (red, green, blue and black to mark features on the provided map after consensus is reached among group members), and notebooks and pens (to document all identified and mapped features). He then described the features to be mapped during the exercise and how each feature was to be classified. In groups representing different areas of the county, participants will map the following categories of features:

- Livestock routes
- Livestock markets
- Water points
- Other livestock-related infrastructure
- Shared pasture resources
- Conflict hotspots

And finally, he gave a precise set of instructions to be followed during the exercise.

Participants then separated themselves into three groups for the eastern, central and western parts of the county. Detailed notes were taken on each feature mapped.



At the end of the first day, each group presented its progress to that point for cross-checking, correction of errors and filling in gaps. On the morning of the second day, the group work to complete the maps continued. The maps for the three sections of the county were then combined, the edges matched and any discrepancies at the edges corrected. Participants ensured that features such as livestock routes linked up seamlessly from one map sheet to another.

The maps of the three groups are lined up to create one all-encompassing map (photo credit: FCDC/Abdirahman Abass).

Discussion of the way forward

By mid-morning of the second day, the above steps were completed and a discussion on the way forward followed. One participant asked why so much attention was being directed to livestock routes used by people from other counties who move into Lamu county during one particular season of the year. Another participant, however, highlighted that livestock owners from Lamu also use the same routes at other times of the year to move their livestock out of Lamu into those same counties. Those routes, he argued, are major livestock routes used all year round.

Wachu commented that many conflict hotspots, shared pasture areas, livestock routes and other livestock issues have not been considered in new developments. One such example is Witu ranch, the creation of which blocked a livestock route.



Another participant pointed out that between Lamu and Tana River Counties, there are no assigned routes. During the rainy season, livestock are moved out of the flooded areas into uplands. When moving back, they then have to pass through farming schemes. This creates a permanent conflict zone. Though grazing areas exist, they are not properly designated and therefore end up being converted into farmland.

Detailed notes were taken on all of the features mapped (photo credit: ILRI/Lance W Robinson).

One participant observed that pastoralists from some areas of the county were not represented at the workshop and emphasized that it is important for them to be invited to subsequent events.

Another participant pointed out that the maps will be useful in managing the implementation of the LAPSSSET corridor. He noted that, wherever it is finally situated, it will cut across some livestock routes and grazing areas. Therefore, livestock routes and grazing areas need to be considered in this and other developments.



Features such as livestock routes and grazing areas that cross between the groups' maps were checked carefully (photo credit: FCDC/Abdirahman Abass).

A participant identified conflict issues depicted on the map of Pate Island. All of the land is subdivided into individual plots, yet people have livestock to graze.

Abass suggested that to address these issues, the county needs to develop livestock and land policies. Another participant suggested that as a way forward, pastoralists in the county need to form a committee to lobby for effective land policies.

Participants leaving the workshop were urged to share information and sensitize people in their home communities to the issues regarding land use and resource sharing. However, another participant noted that this is a difficult task which requires support from NGOs or government. In response, it was suggested that further sensitization be carried out after ILRI and FCDC have validated and digitized the workshop maps. The completed maps can then be shared with a wide circle of pastoralist community leaders.

The deputy governor of Lamu county, Abdulhakim About Bwana, pointed out that by simply holding this workshop, the work on these tasks has begun. This was why he requested FCDC and ILRI to bring this mapping approach to Lamu. He emphasized that sensitization of people beyond this workshop must include the message that solutions to the problems raised will not simply happen—they need to be planned.

Another participant emphasized that it will be very important to have pastoralists on board, seeing that there is a big push to subdivide land, a process which would affect pastoralists. He further noted that if the pastoralists are not well represented in these processes, they will not succeed.



Participants discuss the implications of the maps (photo credit: FCDC/Abdirahman Abass).

The deputy governor responded by highlighting the need for serious follow-up on this process. Attempts were made to include participants from the entire county but unfortunately, some invitees did not attend the workshop. He therefore urged those present to sensitize people in their own communities.

Wachu argued that even though a few invitees for the workshop were missing, the knowledge in the room did cover the entire county and the mapping work was detailed and successful. He outlined the next step which would involve using Global Positioning System units to verify map features. He urged the deputy governor in particular to investigate farming schemes that have blocked livestock routes.

One elder thanked the deputy governor for coming, noting that with devolution, these issues are no longer at the national level—they can be solved by the county government. He further noted that the organizations represented should endeavour to identify donor agencies that can help with the processes such as demarcating and servicing livestock routes.

Closing remarks

Robinson thanked the participants for their input. He highlighted that the participants need to work with their elected representatives and the county Department of Land and Physical Planning to bring this work to the next level. More importantly, the county spatial planning process, Robinson said, does not need to be a battleground between different interests; instead, it can be used to build unity and harmonize various interests.

Abass pointed out that these kinds of conflict issues are not unique to Lamu. They occur elsewhere in Kenya and in Africa. Therefore, he urged participants to discuss these matters and resolve the issues in a sober way.

The deputy governor closed the meeting with a few remarks. He called on participants to work together to solve the issues that were raised at this workshop. He gave examples of solutions to livestock and pastoralist issues coming from the bottom-up in other countries. He further noted that, as a community, the people of Lamu can also start looking for solutions. But when problems arise—when a livestock route is encroached, for example—the problem must be addressed immediately, not ignored for ten years. If an issue is raised years after its occurrence, such as a livestock route converted into farms, no one is going to evict the farmers. Now that this mapping work has been

done, he said, people can clearly identify the areas that need attention and protection. The next step, he reminded the participants, is validation of the maps and he indicated that he is ready to support the process.



Workshop participants (photo credit: FCDC/Abdirahman Abass).

Annex I: Workshop program

Day 1

1000–1040	Welcome, introduction of participants and opening remarks
1040–1100	Tea break
1100–1140	Brief on county spatial planning and on the concept of mapping livestock routes and other rangeland resources
1140–1200	Explanation of the steps and mapping elements
1200–1300	Start of the mapping exercise
1300–1400	Lunch
1400–1530	Continuation of the exercise
1530–1600	Tea break
1600–1645	Presentation of each team's mapping work

Day 2

0830–1030	Continuation of the exercise
10.30–1045	Tea break
1045–1115	Edge-matching/assembling the full county map
1115–1215	Closing discussion/way forward

Annex 2: List of participants

Name	Position/role	Location/organization
Mohamed Dokota	Community representative	Dede Waride
Paul Munyendo	GIS expert	County Government of Lamu
T.T. Mbwana		TFCO
Elim Limlim		FCDC
Abdirahman Abass	Coordinator, Sector Forum on Agriculture and Livestock	FCDC
Kalmoy Muhumed Hared	Community representative	Koreni
Dr Duncan Mwakiwalo	Veterinarian	Lamu East
Jare Elema	Community representative	Witu
Somo Mohamed Somo	Community representative	Manda
Bwana Hamadi Mahmud	Community representative	Faza
Mohamed Yussuf Omar	Community representative	Kizingitini
Musa Ibrahim	Community representative	Mpeketoni
Charles Githinji	Community representative	Mpeketoni
William M Magiri	Assistant county commissioner	Hindi
Emmanuel K Koech	Assistant county commissioner	Witu
Ishaq Abubakar		Lamu Youth Alliance, Mtendoni
Abdalla Faraj		WWF
Abdi Mohamed Abuli	Community representative	Bothai
Emmanuel Mae Karisa	Livestock production officer	Lamu West
Abduswamadu Mohamed Ahmed	Community representative	Hindi
Bashora D Wachu	County Livestock Production Officer	
Katana Charo Sirya	Community representative	Witu
Salim Bute Galgalo	Community elder	Mpeketoni
Mohamed Moulid		National Drought Management Authority
Adam Lali		Save the Children
Said Abdirahman Ahmed	Community representative	Ndambwe
Abdalla Ben	Assistant chief	Bothai
Abdirehman Abdillah Modh	Community representative	Koreni
Zeinab Gobu	Community representative	Witu
Vae Somoebuona	Community representative	Faza
Bakari Athman Khamis	Community representative	Mkunubii
Bakari Stadi	Community leader	Faza
Keya Mohamed Fumo	Farmer	Mangai
Abdi Ali	Farmer	Mangai
Stephen Oloo	GIS expert	ILRI
Lance W Robinson	Senior scientist	ILRI
Yassin Getahun	GIS expert	ILRI

ISBN: 92-9146-585-9



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