ILM served as a unifying framework to align environmental sustainability with economic resilience in these fragile landscapes. Our landscape goals were to increase Productive and resilient landscapes; restoration of natural resources (biodiversity); Improving adaptation capacities, productivity, landscape management, and reducing food losses; and building Resilient pastoral communities.

Integrated Landscape Management for resilient pastoralist economies in Kenya's ASALs: Lessons from the ICSIAPL project

Introduction

Pastoralist and agro-pastoralist communities in Kenya's Arid and Semi-Arid Lands (ASALs) face growing vulnerability due to climate variability, natural resource degradation, and fragmented land-use practices. Most of the challenges were brought out through gap analysis study that engaged the counties, community organisation and stakeholders operating in the three project counties.

In response to these challenges, the Integrated & Climate Smart Innovations for Agro-Pastoralist Economies and Landscapes in Kenya's ASALs (ICSIAPL) project was implemented across Kajiado, Narok, and Taita Taveta counties. The project adopted an Integrated Landscape Management (ILM) approach, which proved instrumental in promoting coordinated resource use, enhancing ecosystem services, and strengthening the adaptive capacity of pastoralist communities.

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This culminated in various issues that were to be addressed towards the achievement of the goals. Some of these were:

- Frequent Droughts, rampant livestock losses and losses of livelihoods
- Pastoralism threatened by negative feed balances occasioned by massive land degradation and invasive species which have reduced grazing areas significantly
- Low capacity of communities on improved pasture / Rangelands management
- Poor coordination of stakeholders implementing various interventions in the counties

ILM strategy and application in ICSIAPL

1. Participatory planning and Multi-Stakeholder Platforms (MSPs):

The project established and strengthened MSPs including community-based organisations, county government departments, Water Resource User Associations, ranches, conservancies, cooperatives and local Non-Governmental Organisations. These platforms served as inclusive spaces for joint planning and collaborative decision-making across key sectors such as land, water, and livestock. Through these MSPs, landscape management plans were co-developed, blending scientific data with indigenous knowledge to guide sustainable resource governance. This participatory approach allowed ownership, improved coordination, and enhanced the effectiveness of interventions at the landscape level.

2. Sustainable rangeland management

Through the implementation of rotational grazing and targeted land restoration efforts, the project successfully placed over 6,070 hectares under sustainable grazing management. These interventions aimed to restore degraded rangelands, improve forage availability, and enhance ecosystem resilience. Key practices included:

- Reseeding of 121 hectares in degraded ranch lands (e.g., Mgeno and Olosentu)
- Use of zero-visibility bomas to prevent overgrazing and enhance land regeneration
- Development of controlled grazing blocks aligned to forage calendars
- Participatory/ community led landscape management approaches

Zero visbility boma at Mgeno ranch in Taita Taveta County

3. Capacity building and institutional strengthening

County extension officers, landscape champions, and technical officers were trained in ILM, enabling continuous support to pastoralists after project exit. These actors facilitated community trainings on forage strategies, ILM governance and climate adaptation.

4. Policy and enabling environment

ICSIAPL engaged county governments to integrate ILM in County Integrated Development Plans (CIDPs) and supported the review of policies such as the Kajiado Agriculture Mechanisation Services Act. National dialogues on forage seed policy and rangeland governance were supported in collaboration with The Kenya Plant Health Inspectorate and Kenya Agricultural and Livestock Research Organisation.

Outcomes of ILM implementation

- **Improved rangeland health:** Areas that were reseeded and managed through rotational grazing exhibited significant improvements in ground cover, soil structure, and forage biomass contributing to healthier and more productive rangelands.
- **Reduced migration and conflict:** The availability of localised forage and water resources reduced the need for long-distance livestock migration. This, in turn, helped ease tensions and conflicts over grazing rights, particularly in shared landscapes.
- **Inclusive participation:** The project promoted inclusive landscape governance by actively involving women and youth in Multi-Stakeholder Platforms (MSPs) and capacity-building programs, ensuring their voices and contributions were integrated into decision-making processes.
- **Strengthened institutional linkages:** ILM facilitated improved coordination among agricultural, environmental, and water sectors, leading to more coherent and integrated county-level planning and resource management.

Challenges encountered

- **Land tenure issues:** Land subdivision and privatisation in some areas, particularly in Kajiado, limited the scalability of communal grazing plans.
- **Climatic variability:** The uneven distribution of rainfall and extreme weather events disrupted planned ILM cycles. During implementation, the project experienced drought that led to migration of livestock and eventuality culminating to high mortality rates. This resulted to fewer farmers being reached than planned as well as female because most men migrated.
- **Stakeholder coordination:** Sustaining active participation in MSPs required ongoing facilitation and alignment with other county priorities. Most of the organisations operating in areas are operating in silos despite efforts to streamline coordination efforts through MSPs.
- **Gender issues in ILM:** During capacity building sessions on land restoration, women turnout in large numbers but decision making interms of land management is a preserve of men, hence their efforts to effectively implement are curtailed.

Challenges encountered...cont

- **Some of the activities like soil conservation measures, fencing springs for protection and invasive species management are labour intensive.** This calls for access to financing to meet the labour costs which becomes a challenge since their livestock as key source of livelihood were affected by drought.
- **Cultural orientation in livestock management:** The livestock system by the agropastrolists is a cultural practice and not as business. Hence this ends up keeping high population of livestock in the range for so long hence fast-tracking degradation.
- **The youth trained as champions normally migrate to towns for white collar jobs**. Therefore, the project had to conduct more trainings for the technology transfer sessions to continue. Most of them alluding to the fact that no land to practice what they have learnt.

Lessons learned

- **ILM requires flexibility:** Adaptive planning is essential in ASAL contexts, where environmental and social conditions are highly dynamic. Flexibility allows for timely adjustments and more responsive interventions.
- **Community ownership is key:** Meaningful engagement of traditional institutions, local champions, and community-based organisations (CBOs) builds legitimacy, trust, and increases the likelihood of sustained adoption of ILM practices.
- **Cross-sector coordination drives impact:** Integrating efforts across agriculture, livestock, water, and environmental sectors creates powerful synergies. This holistic approach is fundamental to the success of ILM.
- **Policy integration sustains gains:** Embedding ILM principles into county policies and County Integrated Development Plans (CIDPs) ensures long-term institutional support and resource allocation, helping to sustain project outcomes beyond the implementation period.
- **Multistakeholder platforms have become important in implementation** as learning hubs as well as good coordination efforts in integrated landscape management in ASALs to that promotes leveraging on resources and deters duplication of efforts.
- **Implementation of interventions in an ASAL set up needs an array of approaches that are intertwined for effectiveness** and results to be realised since it's not one fit for all. This is because each area has its own unique features, characteristics and different kinds of challenges affecting landscapes that need a myriad of locally led interventions.
- **ASAL projects need more than 3 years and integrated interventions coupled with adaptive management approaches for impacts to be witnessed.** The project had been implementing interventions in ILM with no results to show until the third year since they were focusing on capacity building and social behavioural change interventions especially with introduction of new concepts. There were also disruptions in implementation because of erratic weather that hindered effective implementation as planned.

Lessons learned...cont

- **Community led landscape management approach –** Most of the successful landscape management interventions were participatorily identified by the community groups and leaders within the targeted landscapes. This also blended well with intertwining with indigenous knowledge which promoted ownership. Eg in Planned grazing systems we started with trained the on how to enhance their Olopolori(paddocks) system and this was well adopted. Therefore, Success of community landscape management driven initiatives/ participation in identification of landscape restoration initiatives has led to sustainable and effective NRM
- **"Challenges "can also be a driver in changing of fixated mindsets** e.g. the effects of drought and rangelands management. Then from there the community is charged with crafting the possible interventions that can work within their context.
- **Livelihoods enhancement (Alternative livelihoods) interventions are key to resilience building and ILM.** This eases the pressure on natural resourceseg charcoal burning
- **Exposure visits, peer learning sessions and demonstration sites were some of the best modes of capacity building** in the ASAL context considering the literacy and numeracy levels. This has witnessed adoption of technologies they have seen in similar contexts in their areas. Eg water harvesting techniques, invasive species management demonstration sites etc

Opportunities

- Opportunity for upscaling beef and dairy as a business model and means to sustainable utilisation of resources now that rangelands are faced with encroachment because ofchanges in land use, growing population and as adaptation mechanism to climate change challenges. This is through capacity development and B2B linkages to ensure that there is profitable business to incentivize that makes economic sense to the private sector. E.g. focus to the counties like Kajiado that's focusing on modulated pastoralism.
- Within SNV- rising knowledge on regenerative agriculture programmes can be upscaled to ASAL counties with purposes of promoting the adoption of holistic grazing management and other land restoration practices
- The adoption of land restoration technologies has taken place, but the farmers are in the economic recovery mode after losing livestock- main source of livelihood to drought. There is an opportunity to upscale these activities through leveraging with other projects, working with financial institutions or incentivising through innovation funds.

Conclusion

Results from the ICSIAPL project showed the potential of Integrated Landscape Management as a tool for resilience in pastoralist economies. By aligning ecological, economic, and institutional interventions at the landscape level, ILM provides a pathway for sustainable and inclusive development in Kenya's drylands. Scaling this approach will require continued investment in governance systems, capacity building, and climate-informed planning

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